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CHESAPEAKE BAY IN LEGAL PERSPECTIVE

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March 1970

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Chesapeake Bay in Legal Perspective

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ESTUARINE POLLUTION STUDY SERIES - 1

CHESAPEAKE BAY IN LEGAL PERSPECTIVE

by

Professor Garrett Power
Project Director

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U. S. DEPARTMENT OF THE INTERIOR
Federal Water Pollution Control Administration
Office of Operations
Division of Planning and Interagency Programs
Estuarine and Oceanographic Programs Branch

March 1970

FOREWORD

The Clean Water Restoration Act of 1966 stated in Section 5(g) that the Secretary of the Interior:

> "Shall, in cooperation with . . . other appropriate Federal, State, interstate, or local public bodies and private organizations, institutions, and individuals, conduct and encourage contributions to, a comprhensive study of the effects of pollution . . . in the estuaries and estuarine zones of the United States . . ."

(The complete text of Section 5(g) is included in the inside back cover of this document.) In response to this decree and on behalf of the Secretary of the Interior, the Federal Water Pollution Control Administration conducted the National Estuarine Pollution Study which resulted in a Report to the Congress on November 3, 1969. A substantial amount of the information compiled and analyzed by the Study was obtained through contracts awarded to various individuals and organizations to assemble information and data on specific aspects of the effects of pollution on estuarine areas. These contracts resulted in reports which were used in the preparation of the Study's Report to Congress.

To make available the total reports contributing to the Study, specifically the contractors reports, this Estuarine Pollution Study Series was created. The reports included in this Series are essentially the same, except for minor editing, as the form in which they were submitted to the Study.

The statements included in the reports and the products mentioned do not constitute endorsement by the Federal Water Pollution Control Administration nor the National Estuarine Pollution Study (conducted by the FWPCA's Estuarine and Oceanographic Programs Branch). Each report constitutes only a segment of the overall National Estuarine Pollution Study; generally each report describes one or two of the three estuarine environments (biophysical, socio-economic, and institutional) in a specific geographic area. Therefore, it cannot represent the overall conditions existing in the estuaries from a national viewpoint.

A limited number of copies of the reports included in this Series are available from Chief, Estuarine and Oceanographic Programs Branch, Federal Water Pollution Control Administration, U.S. Department of the Interior, Washington, D.C. 20242. Copies of these reports are also available for a nominal cost from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Reports in this Series are numbered sequentially. The Report "Chesapeake Bay in Legal Perspective," by the University of Maryland School of Law was selected as the initial one in this series because it describes the legal management environment in the Chesapeake Bay which has many of the characteristics existing in other estuarine areas. Also this report contains a suggested model statute for estuarine management at the State level which may be used as a guide to States in improving the management of their estuarine and coastal areas.

David D. Dominick, Commissioner
Federal Water Pollution Control
Administration

ABSTRACT

The Chesapeake Bay is a major east coast interstate estuarine area which has many legal and management characteristics which exist in other estuarine areas of the United States. This report describes the historical development and resulting complex, interacting legal framework at the Federal, State, local, and interstate levels which regulates the development of the Bay's resources. Several case studies are presented which relate the complex legal framework to specific estuarine management problems such as water quality management, withdrawals and diversions, and dredging and dumping. Using the legal framework and case studies as a basis, a suggested model statute is presented which may be of assistance to coastal States in improving the planning, development, management, and conservation of their estuarine areas. The report is written so that it can be understood by the layman as well as the legally and technically trained reader.

ACKNOWLEDGMENTS

This report is a result of one year of study and research. Although it is not possible to recognize every contribution, the project directors thank the following for their valuable assistance:

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INTRODUCTION

This study analyzes the legal problems in the development and management of Chesapeake Bay resources. There are threshold problems of definition——What is Chesapeake Bay? What are its resources? What role does law play in their development and management?

The term "Chesapeake Bay" can be used in a variety of ways. On maps, it generally designates the principal branch of the semi-enclosed coastal waters found in Virginia and Maryland. For the purposes of this study, Chesapeake Bay is accorded a broader definition; it refers to the coastal plain estuary formed by the drowning of the lower reaches of the Susquehanna River Valley. So characterized, the Bay can be described in many ways. It is 165 nautical miles long, averages less than 20 feet in depth, contains 18,520 billion gallons of water, and has a surface area of 4,300 square miles and a shoreline of 4,500 miles. Its sea waters are measurably diluted with fresh waters and subject to the ebb and flow of the tide. It serves as an ecological base for a number of maritime species, among them oysters, soft shell clams, and blue crabs. It encompasses, in whole or in part, a number of bodies of water having other popular or political names, such as the James, Rappahannock, Potomac, Patuxent, Susquehanna and Choptank Rivers, and Tangiers and Pocomoke Sounds.

Chesapeake Bay serves a wide variety of human uses. It is and has been a popular recreational area, a preserve for marine and wildlife, a highway for commerce, a source for minerals and cooling waters, and a sewer for the disposal of wastes. Potentially, it can serve many other uses as human demands change. This study accepts these realized and potential uses as the Bay's resources.

Today, pressures for the varied use of Chesapeake Bay are more intense than ever before. An increasing population looks towards the Bay for new habitable areas and recreational facilities, and as a conduit for the disposal of wastes. Technological advances have enhanced the value of existing resources and will create new resources. New dredging and filling methods make the large scale conversion of wetlands to fast land economically feasible. Modern construction techniques suggest the possibility of the construction of offshore projects, such as airports. Power plants use Bay waters as a coolant. The development of larger cargo ships necessitates the deepening of shipping channels. But, the very factors which make the Bay more valuable for some human uses threaten to dissipate other resources. The filling of wetlands, the disposal of municipal and business wastes, the deposition of spoil from channel deepening, and thermal discharges, all tend to diminish the Bay's usefulness as a commercial source of fish, shellfish and crabs and as a site for waterfront housing, swimming, boating and hunting.

Law has no peculiar insight or facility by which it may determine the optimum use of Bay resources. Such decisions must result from a political evaluation of economic, scientific and technological data. But law is the vehicle through which a resource allocation decision is made. Several legal institutions participate in this process. Legislatures pass laws, courts render decisions, and administration agencies make rules and resolve controversies.

This study analyzes the efficacy with which these legal institutions encourage multiple compatible uses, and make rational choices between incompatible uses of Chesapeake Bay. It is divided into four parts: HISTORICAL PERSPECTIVE, LEGAL FRAMEWORK, CASE STUDIES, and DRAFT LEGISLATION.

The HISTORICAL PERSPECTIVE traces the political controversies that have involved the Bay since the colonies of Maryland and Virginia were first founded. In a rough sense, it defines the traditional resources of the Bay by isolating occasions when individuals, businesses and governmental bodies found themselves at cross-purposes as to how the Bay was to be used and shared.

The LEGAL FRAMEWORK describes the rights of competing parties to resources which the Bay supports, in terms of conventional legal categories. With whatever exactitude the law affords, it asks and answers the following questions---Who owns the shoreline and bed of the Bay? What special rights does the law give to private owners of land abutting the Bay? What rights does the law give all private individuals in Bay resources? What are the constitutional and territorial limitations on the regulatory powers of Virginia, Maryland and the United States?

The CASE STUDIES divide the resources of the Bay into functional categories. Each case study is prefaced by an analysis which determines who the competitors are and the nature of the conflicting uses which they wish to make. An analysis is then made of the facility with which legal institutions resolve the conflicts. If it is found that the existing law does not provide a mechanism for making a rational and efficacious decision, recommendations are made as to how the substantive law or legal machinery should be changed to accomplish this end.

The DRAFT LEGISLATION implements the recommendations made in the preceding section. The legislation is supported by comments indicating how and why drafting decisions were made.

PART ONE:

HISTORICAL PERSPECTIVES

I.

THE BAY AND HISTORY

"Scarcely a summer passes that someone is not digging on Gibson Island for Captain Kidd's treasure."

The history of Chesapeake Bay and its various tributaries is closely bound up with the histories of Maryland and Virginia as colonies and sovereign states and, importantly enough, with the early political and economic history of the country. That such a sweeping comment can apply to but few other geographical areas in America lends substance and a meaningful perspective to the rather isolated treatment of the Bay's history which follows.

To the early colonists the Bay was a highway and marketplace, and the main source of their prosperity. In a country without roads, the vast network of natural waterways opened up many square miles of hinterland to rapid settlement. The first Maryland frontier was land which bordered on the water, and both the eastern and western shores of the Bay were settled up to the mouth of the Susquehanna before the interior counties ceased to be thought of as "backwoods". The Bay was traded on, fought on, and played on, and "its inlets and estuaries were so numerous and so accommodating that nearly every planter had navigable salt water within a rifle's shot of his front door."[1]

Strong arguments have been made by historians in support of the academic thesis that Chesapeake country was the nation's birthplace. It was here that the Virginia Company planted the first seeds for a representative government, from which sprang our first state legislature. What began as a quarrel between an early Virginia adventurer and the second Lord Baltimore led to the first naval battle in American waters, and subsequently to the first civil war on New World shores. Richard Lee (who in June of 1777 moved that the colonies be "free and independent") and Patrick Henry were two of many early patriots to call Maryland and Virginia tidewater their home. And because it connects thickly settled portions of the eastern seaboard with the Atlantic Ocean, the Chesapeake Bay has played an important role in many of this country's foreign and domestic wars.

The Bay's natural resources were recognized and appreciated from the beginning by colonial traders, planters, seamen and hedonists. An inland sea with a two hundred mile shoreline and a drainage system unique in North America, the Chesapeake was seen to make its surrounding land "the best water'd Country" by providing it with "the best and most convenient Navigation unit of any known Country in the World."[2] A seventeenth century traveler asserted that "no Country in the World can be more curiously watered," and that the Bay's tidewater would ultimately become "the richest place in all America."[3] And an early American historian described the Chesapeake as "that grand reservoir, into which are poured all the vast rivers, which . . . open the interior parts of the country to navigation, and render a commercial intercourse more extensive and commodious than in any other region of the globe."[4]

Such unqualified encomiums have not been limited to the Bay's mercantile advantages. Through history the beauties of the Chesapeake have inspired bountiful, if lavish, description. Of the more subdued testimonials, the following might be typical:

> Tidewater Maryland sits like a chaplet about the head of the Chesapeake. So persistent is the appearance of water in the landscape that its land area seems only a little greater than the water area. Its green shores and necks and points and islands intertwine with the complementary water-lines of the great bay, of little bays, and of the shores of meandering rivers and creeks and coves, with such bewildering variety that all pattern seems to be lost. The land seems as often water-locked

> as the water seems landlocked. Land and water here fondle each other like caressing lovers, and their embraces have the welding intimacy of lovers' embraces.[5]

The seascape for this land of pleasant living has been at once the object of commercial exploitation and the subject-matter for poets:

> From Chesapeake men I come,
> These men a sun-tanned, quiet breed,
> With eyes of English blue and faces
> Lived with many a watch of sunlit waters;
> These men with cautious mouths and lazy stride,
> grizzled chinned, hip-booted, oil-skinned men;
> These men, they fear the Chesapeake,
> And yet they would not leave her.[6]

Thus filled with delight for those who live on its shores, the Bay and its tidewater seem now to exist in placid ignorance of their past. Yet even now they cannot escape their history, and in their history rests much of their charm. Rivers, inlets and islands on the Chesapeake are named after Indian tribes which dwelled there 3000 years ago. And "scarcely a summer passes that someone is not digging on Gibson Island for Captain Kidd's treasure."[7] The U.S. Navy's Constellation, built on the Chesapeake in 1794, can yet be seen in the harbor at Baltimore. Annapolis retains the flavor of the Chesapeake as its narrow cobblestoned streets and small colonial houses and mellowed old State House reflect the history of America.

And the Bay remains peaceful and proud, still remembered for the battles fought, the freedoms won and the prosperity gained upon its waters.

* Notes *

I. THE BAY AND HISTORY

1. 2 J.T. SCHARF, HISTORY OF MARYLAND 2 (Reprint 1967) (hereinafter cited as SCHARF). "These factors account for the rapid growth of the Chesapeake country in population, wealth, and preëminence among the American continental colonies. Had there been no Chesapeake Bay, it is certain that Virginia and Maryland would have increased in population and wealth at a much slower rate." A.P. MIDDLETON, TOBACCO COAST 33-34 (1953) (hereinafter cited as MIDDLETON).
2. Letter from Alexander Rose to Robert Grant, 33 VA. MAG. OF HIST. & BIOG. 83 (1925).
3. 3 TRACTS AND OTHER PAPERS RELATING PRINCIPALLY TO THE ORIGIN, SETTLEMENT, AND PROGRESS OF THE COLONIES IN NORTH AMERICA No. 12 at 11 (PETER FORCE ed. 1836-46).
4. WILLIAM ROBERTSON, HISTORY OF VIRGINIA AND OF NEW ENGLAND (1799) (cited by MIDDLETON at 30-31). For a random sampling of concurring views on the importance of the Chesapeake Bay in history, see H.N. CHRISTIAN, LIFE AND LIVING ON THE CHESAPEAKE BAY (1959); E. Horan, *Maritime Museum for the Chesapeake*, 119 YACHTING 158 (1966); and L. Webb-Peploe, The Chesapeake Bay and its Tributaries (1923 monograph).
5. P. WILSTACH, TIDEWATER MARYLAND 17 (1931) (hereinafter cited as WILSTACH).

   And some writers get even more carried away:

   > Those who have floated through the lagoons of Venice, or the Bay of Naples, or traversed the Danube through the Balkans, or the Rhine through beautiful and historic Rhineland; or voyaged on the renowned Hudson, or through the Golden Gate to Santa Catalina, have seen much that is beautiful, but to them, and others, be

> it known that the moon never smiled on, nor
> the sun's rays never kissed a face more
> beautiful than that of CHESAPEAKE, THE
> "MOTHER OF WATERS!"
>
> —Address by C.W. Wright, Maryland
> Historical Society, Chesapeake Bay,
> "The Mother of Waters", March 25, 1919.

6. C. BYRON, THESE CHESAPEAKE MEN 19 (1942). Additional volumes of poetry on the Chesapeake Bay are G. BYRON, CHESAPEAKE COVE (1953) and THE WIND'S MILL (1969); A. DOWLING, ON CHESAPEAKE SHORES (1959); G. SCHAUN, CHESAPEAKE MEMORIES (1957); and L. THURSTON, SONGS OF THE CHESAPEAKE (1897).

7. E.S. Miers, The Drowned River: The Story of the Chesapeake Bay 29 (1967).

II.

PREHISTORIC CHESAPEAKE

" . . . a lush steaming region of oceanic lagoons and marshes probably reminiscent of present coastal South America."

According to geologists, the Chesapeake was born about one million years ago. Before that it is presumed the whole of the Middle Atlantic region was covered with water. Over the vast amount of time that has passed since its origin, the area has been roamed by all manner of beasts, from mastodons to saber-toothed tigers, from giant plated armadillos to camels. Chesapeake waters were once the habitat for crocodiles, whales, porpoises, sharks, huge scallops and gigantic oysters.

The Calvert Cliffs, in the eastern part of Calvert County, are well known to geologists and paleontologists around the world. The Cliffs were formed during the Miocene Age (fourteen to twenty million years ago), when the Chesapeake's warm shallow waters and lagoon-like environment were favorable for the breeding of whales. Many remains of ancient whales and sharks have been collected there. In the past several decades the site has yielded at least six whale skulls, five backbones and numerous smaller bones of Miocene origin. The most recent discovery occurred in late 1968, when the five-foot skull of a twenty-million year old whale was found at the Cliffs.[1]

In 1685 the first illustration of an American fossil appeared, drawn after a specimen taken from the Miocene beds of Maryland. There is not a great deal of paleontological evidence from which to learn, but what has been found is enlightening. Among the fossils discovered to date there are a few teeth of mammoths and mastodons, and the partial skeletons of camels, tapirs, peccaries, wolves, bears, sloths and porcupines. Geologists suggest that the beaches on Gibson Island and the shores off of the Magothy River yield indications of large prehistoric evergreen forests.

The Bay was once a massive river valley which broadened as it was slowly inundated. The Susquehanna and Patapsco Rivers were northern and southern arms of the Miocenic expanse which slid into the sea. We are told that, long before man made his appearance——

> the Chesapeake country was a lush steaming region of oceanic lagoons and marshes probably reminiscent of present coastal South America. It is likely there was no Chesapeake Bay at all then, only miles of shallow salty channels, broken by winding sand bars, open to the ocean not too far away. Here the sharks and porpoises came to feed on a teeming fish life, and here the whales were often stranded or drifted ashore if one can judge by the frequency of their unmistakable bones. The bellowing of crocodiles filled the air, turtles crept on the sandy beaches to lay their eggs, and swarms of sea birds swirled excitedly over the bars and tidal flats.[2]

Primitive man left ample traces of his habitation of Chesapeake shores. The pre-Columbian Indians built campsites and villages on many rivers and creeks along the Bay. Broad layers of oyster shells and oval blackened pits filled with charcoal and small bones give evidence of prehistoric dwelling places. The Patuxent River valley contains perhaps the highest number of fossilized campsites in the entire Middle Atlantic area.

Other than this, the clearest proof of the existence of the Indians——who they were and where they lived——may be seen in the names that were taken by the early discoverers and given to the numerous estuarine watermarks: from the Wicomico to the Choptank, from the Pocomoke to the Potomac, from the Susquehanna to the Rappahannock.[3]

* Notes *

II. PREHISTORIC CHESAPEAKE

1. The Baltimore Evening Sun, January 14, 1969, § C, at 1.
2. G.C. KLINGEL, THE BAY 171 (1967).
3. See generally G.C. KLINGEL, THE BAY at 163- 174 (1967) and H.N. CHRISTIAN, LIFE AND LIVING ON THE CHESAPEAKE BAY (1959).

III.

PLACE NAMES AND INDIANS

"Such great and well-proportioned men are seldom seene, for they seemed like giants to the English . . . "

Just as a great deal of Maryland's geographical nomenclature is derived from the many Indian groups which dwelled and prospered there, thousands of years before the first white men came, so the Chesapeake Bay takes its name from the tribe which the earliest explorers found living on its shores.

As early as 1590 the Bay appeared as the "Chesepiooc sinus" on a map published by Theodore DeBry, who had relied upon charts drawn by the early English explorers, Ralph White and Richard Hakluyt. Apparently the name was a transliteration from the Indian "Tschischiwapeki" (meaning a pond, a bay, or "Great Waters") although there are other theories as to its genesis. Some say the word originally was "Chesapiooc", taken from the Indian "Kchesepiock" meaning "a country on a great river" or "a highly salted body of standing water." Others maintain that "Chesapeake" is very simply the Indian equivalent for "Mother of Waters," much as "Mississippi" is said to mean "Father of Waters." And still others think that "great shellfish bay" is the proper interpretation.[1]

Approximately two-fifths of the tributaries flowing from the Chesapeake Bay retain original Indian names, and most of these were given by the early English settlers. Among the better known creeks, rivers, sounds and other waterways in the state are the Potomac, Patuxent, Patapsco, Pocomoke and Piscataway; the Magothy, Manokin, Metomkin and Mattawoman; the Assawoman, Annemessex and Assateague; the Chincoteague and Choptank; the Susquehanna, Sassafras, Seneca and

Severn; the Nanjimoy and Nanticoke; the Onancock and Occohannock; and the Rappahannock and Wicomoco.[2]

The majority of the Indians in Maryland were of the Algonquin family, which consisted of numerous smaller tribes. Other large groups were the Iroquois, the Nanticokes, the Susquehannoughs and the Piscataways. On the western shore, most Indians were Piscataway and belonged to various smaller tribes, among them the Mattawomans, the Mattapanys, the Patuxents, the Potopacs, the Chopticans and the Yaocomicos. On the eastern shore, the Nanticokes were divided among the Assateagues, the Annemessex, the Choptanks, the Wickamisses and the Wicomicoes.[3]

Soon after Captain John Smith crossed the Bay to the eastern shore on his first voyage of exploration, he encountered Indians:

> The first people we saw were two grim and stout salvages upon Cape *Charles*; with long poles like jauelings, headed with bone, they boldly demanded what we were, and what we would; but after many circumstances they seemed very kinde, and directed us to *Accomack*, the habitation of their *Werowance*, where we were kindly intreated. This king was the comeliest, proper, civill salvage we incountered. His country is a pleasant fertile clay soyle, some small creekes; good harbours for small barks, but not for ships. They spake the language of *Powhatan*, wherein they made such descriptions of the bay, isles, and rivers, that often did us exceeding pleasure. Passing along the coast. searching every inlet and bay, fit for harbours and habitations. Seeing many isles in the midst of the bay we bore up for them, but ere we could obtaine them, such an extreame gust of wind, rayne, thunder, and lightening happened, that with great danger we escaped the unmercifull raging of the ocean-like water. . . . The next day, searching them for fresh water, we could find none; the defect whereof forced us to follow the next eastern channel, which brought us to the river of *Wighcocomico*. The people at first with great fury seemed to assault us, yet at last with songs and dances and much mirth, became very tractable, but searching their habitations for water, we could fill but three barricoes, and that such puddle, that never till then we ever

> knew the want of good water. We digged and searched in many places, but before two daies had expired, we would have refused two barricoes of gold for one of that puddle water of Wighcocomoco.[4]

Smith and his party continued their investigation of the nearby isles, where they discovered that not all of the Chesapeake's Indians were so friendly. A tribe living on the Cuskarawaock River was quick to demonstrate its hostility. After penetrating a furious assault of arrows, however, Smith was able to negotiate a wary peace. Further along in their first voyage, Smith met the Sarapinagh, Nause, Aroeck, Nantaquak and Massawomeke tribes.[5]

The Susquehannoughs (or Susquehannocks) lived to the north. They were a giant but friendly people, who for many years dwelled at the head of the Bay before being driven by the Senecas to a position near the Maryland-Virginia boundary in 1674. Of the Susquehannoughs Captain Smith wrote—

> Such great and well-proportioned men are seldom seene, for they seemed like giants to the English, yea and to the neighbours, yet seemed of an honest and simple disposition, with much adoe restrained from adoring us as Gods. These are the strangest people of all these countries, both in language and attire; for their language it may well become their proportions, sounding from them as a voyce in a vault. Their attire is the skinnes of beares, and wolves, some have cassocks made of beares heads and skinnes, that a mans head goes through the skinnes neck, and the eares of the beare fastened to his shoulders, the nose and teeth hanging downe his breast, another beares face split behind him, and at the end of the nose hung a pawe, the halfe sleeves coming to the elbowes were the necks of beares, and the armes through the mouth with pawes hanging at their noses. One had a head of a wolfe hanging in a chaine for a jewell, his tobacco-pipe three quarters of a yard long, prettily carved with a bird, a deare, or some such devise at the great end, sufficient to beat out ones braines: with bowes, arrowes, and clubs, sutable to their greatnesse.[6]

Father Andrew White, who sailed over with the first Maryland colonists in 1634, was impressed with the facial appearance of the Susquehannoughs.

> The natives are very tall and well proportioned; their skin is naturally rather dark, and they make it uglier by staining it, generally with red paint mixed with oil, to

> keep off the mosquitoes, thinking more of their own comfort than of appearances. They disfigure their countenances with other colors too, painting them in various, and truly hideous and frightful ways, either a dark blue above the nose, and red below, or the reverse. And as they live almost to extreme old age without having beards, they counterfeit them with paint, by drawing lines of various colors from the extremities of the lips to the ears.[7]

In the early 1600's there were about seven thousand Indians in Maryland. Numerous conflicts with the Maryland and Virginia colonists during the seventeenth century reduced their number to only a few hundred by the beginning of the eighteenth.[8] In 1742 the remaining tribes claimed territory lying along the Susquehanna and Potomac Rivers. A treaty was signed two years later by which the Indians relinquished all their claims in return for £600 sterling.[9]

* Notes *

III. PLACE NAMES AND INDIANS

1. Address by C.W. Wright, Maryland Historical Society, *Chesapeake Bay, "The Mother of Waters"* 1-2, March 25, 1919; A.A. BODINE, CHESAPEAKE BAY AND TIDEWATER 13 (1954); 1 SCHARF at 21; H.R. MANAKEE, INDIANS OF EARLY MARYLAND 43 (1959); and N.T. KENNEY, CHESAPEAKE COUNTRY 372 (1964).
2. Names derived from physical characteristics include Point Lookout, Piney Point, Cedar Point, Cove Point, Herring Bay, Highland Beach, Sandy Point, Elk River, Turkey Point, Still Pond, Swan Point, Poplar Island, Bar Neck, Rugged Point, Barren Island, Terrapin Point and Sand Point. Those of Catholic origin include St. Mary's City, St. Clement's Island, St. Margaret's Island, St. Inigoes Creek, St. George Island and St. Catherine's Island.

   —WILSTACH at 57.
3. MANAKEE, *supra* note 1 at 32-33. *See also* 1 SCHARF at 84 and 87, and, *generally*, R. SEMMES, CAPTAINS AND MARINERS OF EARLY MARYLAND (1937).
4. 1 JOHN SMITH, THE GENERAL HISTORIE OF VIRGINIA, NEW ENGLAND AND THE SUMMER ISLES 173 *ff*. (Richmond ed. 1819) (hereinafter cited as SMITH).
5. *See* footnote 5 under "Smith's Voyages of Exploration" and accompanying text.
6. 1 SMITH 117.
7. FR. A. WHITE, NARRATIVE OF A VOYAGE TO MARYLAND 37-38 (Maryland Historical Society Fund Publication No. 7, 1874).
8. MANAKEE, *supra* note 1 at 38-39.
9. 1 SCHARF at 424 and 427.

IV.

EARLY VOYAGES

". . . within it are many rivers and harbors
where one may anchor by either shore."

Who discovered the Chesapeake Bay? Historians speculating upon that academic query have disputed its answer for many years, and the argument still goes on today.

It is curious that few theorists wrapped up in the continuing debate see fit to qualify their hypotheses by asking who was the first *white man*, or who was the first *European*, to see the Bay, especially since all seem to recognize the fact that Indians lived on Maryland and Virginia shores long before they were visited by explorers from the continent.

Suggestions as to the Chesapeake's true discoverer are numerous and varied. Several writers have placed a Viking in the bay as early as the tenth century and as late as the eleventh, when a Norseman named Thorfinn Karlsefni may have investigated the Middle Atlantic region.[1] In 1492 Spain acted upon Columbus' discovery of the New World by claiming territorial rights to the entire eastern coast of North America. But although the Chesapeake presumably was included in this accession, it was neither named nor specified by the Spanish and was most likely unknown to them. On John Cabot's second voyage to America in 1498, he explored the eastern coast and may have entered the Bay, but again, there is no recorded proof.[2] Then Giovanni Verrazzano, a Florentine navigator sailing under the French flag, is said to have anchored his vessel in 1524 in what is now Chincoteague Bay and to have been the first European to set foot on the eastern shore. And Estevan Gomez, a Portuguese explorer in the service of Spain, may have entered the Chesapeake during his voyage from Newfoundland to the Florida Keys.[3] However sound these hypotheses may be in presumption and logic, there is little documentary evidence by which they can be substantiated.

Much of what is known about those early sixteenth century discoveries is reflected in an official map published by Spain in 1529. The chart shows the results of explorations by Pedro de Quexos, shipmaster to Lucas Vazquez de Ayllon, who had been awarded a royal patent to colonize the Carolina coast. Pedro de Quexos sailed as far north as the 36th parallel, into what he called the Bahia de Santa Maria. This is probably the modern Currituck Sound; there is no indication that de Quexos ever reached the entrance to the Chesapeake Bay.[4]

About that time a Spanish shipmaster found a friendly Indian near the Bahia de Santa Maria and brought him back to Spain, where he was christened Luis de Velasco. The commander of the Spanish transatlantic fleet, Pedro Menendez de Aviles, authorized various exploratory missions during the years from 1561 to 1572. Velasco was to be used as a guide and interpreter. One of the apparent goals was to find and investigate the Indian's birthplace, a settlement called Axacan, which was situated somewhere near the Bahia de Santa Maria. The Spaniards may well have visited Axacan before 1573, but they left no evidence of its precise location. Several further attempts at exploration were abortive.[5]

In 1573 the Spanish navigator, Pedro Menendez de Marques, a nephew of the Florida governor, explored the eastern coast of North America from the Florida Keys to the 37th parallel. There he noted what he thought was the Bahia de Santa Maria, and took soundings; but this was actually seven leagues beyond the Bahia de Santa Maria found by de Quexos in 1525.[6] Marques described "the harbor and bay of Santa Maria, which is three leagues wide, wherein one enters to the north-northwest; and within it are many rivers and harbors where one may anchor by either shore."[7] Since the mouth of the Chesapeake is at the thirty-seventh parallel, Marques thus became the first to record an entrance into the Chesapeake Bay.

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News of the Spanish discovery of the Bay was buried in secrecy——whether purposely or by mere neglect is not known. Europe first learned of the Chesapeake when Sir Walter Raleigh came in 1585 to settle what is now Pamlico Sound. An Indian chief taken prisoner by Ralph Lane, the governor of the fledgling colony, told the settlers much about the large bay to the north from whence he came. Lane searched for the great inland sea described by the captive Indian, and the waters which he found he called the "Chesapeake," after the Chesepuic Indians on its shores. When Wright and Molyneaux drew their first world map using Mercator's projection, they copied the name which has come down through the ages.[8] As noted earlier the Englishmen Ralph White and Richard Hakluyt also furnished rough sketches of the Bay, and their approximations appeared as the "Chesepiooc sinus" in Theodore DeBry's publication of a map of the area in 1590.[9]

In 1587 Raleigh directed his colonists to move the Roanoke Island settlement to a new location on the shores of the Chesapeake. Two years earlier an exploring party had penetrated 135 miles northward to the country of the Chesepians or Chesepiook, where they were told by the tribal king that further northward was the province of more Indians, situated in a bay with a "great store of pearls."[10] Before Raleigh's new orders could be carried out, the colonists disappeared. When the next English ships called at Roanoke in 1590, the only clue to their whereabouts was the word CROATAN carved on a tree. (The Croatans were a tribe of nearby Indians.) The fate of the colonists on Roanoke Island remains one of the unsolved mysteries of American history.

There has been no little conjecture about the first white man to see the Chesapeake Bay. Some still maintain that the Italian Cabot was the first, but there are advocates for his countrymen, Verrazzano and Amerigo Vespucci; for the Spaniards, Gomez, Quexos and Marques; as well as for the early Vikings.[11] Other arguments have been kindled over who was the first Englishman to see the

Bay. Did White sail into the Chesapeake shortly before Lane's party in 1585, or was it the other way around?[12] Was Captain Christopher Newport's fleet of three vessels involuntarily blown into the mouth of the Bay even before White or Lane?[13] Or was Captain Bartholomew Gilbert actually the first, when in 1603 he sailed up the Bay searching for survivors of the Roanoke colony?[14] These debates are of little moment when viewed in the light of the later explorations of the English adventurer, Captain John Smith, the first man to investigate the Chesapeake Bay and to catalogue his discoveries in detail.

* Notes *

IV. EARLY VOYAGES

1. *See, e.g.*, H.N. CHRISTIAN, LIFE AND LIVING IN THE CHESAPEAKE BAY REGION 1 (1959) and A.A. BODINE, CHESAPEAKE BAY AND TIDEWATER 13 (1954).
2. *See* CHRISTIAN, *supra* note 1, and G. BYRON, EARLY EXPLORATIONS OF THE CHESAPEAKE BAY 20 (1960).
3. BYRON, *supra* note 2 at 2 and E.S. Miers, The Drowned River: The Story of Chesapeake Bay 10 (1967).
4. L.D. Scisco, *Discovery of Chesapeake Bay, 1525-1573*, 40 MD. HIST. MAG. 95 (1947). *See also* H.P. HOBBS, PIONEERS OF THE POTOWMACK (1964).
5. Scisco, *supra* note 4 at 278-82.

   Around 1570 Spanish Jesuits spent five months at a settlement near the York River in Virginia. They were all murdered. Other Spanish visitors came in 1571 and 1572 but no settlements were made until the Jamestown colony took permanent root in 1607. BYRON, *supra* note 2 at 20. *See also* M.V. BREWINGTON, CHESAPEAKE BAY: A PICTORIAL MARITIME HISTORY 1 (1956) (hereinafter cited as BREWINGTON).
6. Scisco, *supra* note 4 at 282. *See also* BYRON, *supra* note 2 at 3, CHRISTIAN, *supra* note 2 at 1 and BREWINGTON 1.

   According to Scisco, the invalid theory that the Bay was really discovered by the Axacan missions began with a communication from one Robert Greenhow to the Virginia Historical Society in 1848 which has been erringly followed by other historians ever since. Greenhow's thesis was that the Spaniards had knowledge of the 37th parallel Bahia de Santa Maria in 1566, and suggested that this was the Chesapeake. One of those who accepted the suggestion was Scharf (vol. 1 at p. 22). Greenhow's letter can be found in C. Robinson, An Account of the Discoveries in the West Until 1519 and of Voyages to and along the Atlantic Coast of North America from 1520 to 1573 (Richmond, 1848)

7. BARCIA, ENSAYO CRONOLOGICO appearing in JEANNETTE CONNOR, COLONIAL RECORDS OF SPANISH FLORIDA as cited by Scisco, supra note 4 at 282 and 286. See also 1 SCHARF at 21-22.

8. Scisco, supra note 4 at 282-283 and BREWINGTON at 1. For another interpretation see BYRON, supra note 2 at 3-4.

9. See also footnote 1 and accompanying text under "Place Names and Indians."

10. 1 SCHARF at 20.

11. See footnotes 1 through 7 supra and accompanying text, and WILSTACH 27-28.

12. See, e.g., BYRON, supra note 2 at 3 and WILSTACH, supra note 11 at 28.

13. See S. EARLE, THE CHESAPEAKE BAY COUNTRY 250 (1938) and Address by C.W. Wright, Maryland Historical Society, Chesapeake Bay, "The Mother of Waters," March 25, 1919.

14. See L.D. Scisco, Voyage of Vincente Gonzalez in 1588, 42 MD. HIST. MAG. 95 (1947); HOBBS, supra note 4 at 12; and BYRON, supra note 2 at 5-6.

> On July 25, 1603, Captain Bartholomew Gilbert made his voyage up the Chesapeake Bay in Virginia, "being the first that sailed up into it and landed there. The Indians set upon him and his company in the woods; and Captain Gilbert and four or five of his men were killed by their arrows, upon which his crew returned home."
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> —1 OLDMIXON, BRITISH EMPIRE IN AMERICA 354
> (as quoted in 1 SCHARF at 20).

V.

SMITH'S VOYAGES OF EXPLORATION

" . . . heaven and earth seemed never to have agreed
better to frame a place for man's commodious and delightful habitation!"

Sir Walter Raleigh's expedition in the latter part of the sixteenth century met with enough frustrations to stifle England's enthusiasm for colonization of the New World. That spark was not rekindled until Bartholomew Gosnold, who had visited the eastern coast in 1602 and had become excited with prospects for its settlement, united with John Smith, the adventurer whose daring exploits in other lands made his reputation in London.

On April 10, 1606 King James I issued letters of patent to the London and Plymouth Companies, with the former assigned to colonize the territory around Virginia, and the latter designated to do the same for New England. Three vessels under the command of Captain Christopher Newport sailed from England in mid-December. On April 26, 1607, the small fleet entered the Chesapeake Bay, between two capes they named after Henry, the Prince of Wales, and his brother Charles, the Duke of York. The colonists were pleased with this first view of their new home, Captain Smith declaring that "heaven and earth seemed never to have agreed better to frame a place for man's commodious and delightful habitation."[1]

All was not so pleasant in the early years. During the first twelve months, famine, disease and the Indians reduced the original settlers from 105 to 38. Those who survived had already prepared to sail back to England when they were met in the river off of Mulberry Island by Lord Delaware. He prevailed upon them to return to Jamestown. It developed that the King had granted a new charter to Sir Thomas Dale, under which land was assigned to anyone who chose to cultivate it, and profits remained largely with the planter. This seed of hope for the entrepreneur soon blossomed into mild but sure prosperity for the London Company, and the colony began to take permanent root.[2]

It was at this point in history (on December 10, 1607) that Captain Smith led a party of nine men up the Chickahominy River as part of his continuing exploration of the tributaries to the James. Three of the adventurers were killed by savages; only the gift of a compass and bold words to the Chief Opechancano saved Smith's life. Eventually he was taken before the great Indian leader Powhatan, who lived off the Pamunkey (today's York) River. Pleasantries were exchanged, and Smith extracted a promise of safe conduct back to Jamestown (for which he later sent gifts to Powhatan). At least this is the story Smith told upon his return. The account of how Powhatan's daughter, Pocahontas, had saved his life did not appear until sixteen years later, with the publication of the Captain's General History of Virginia, New England and the Summer Isles.[3]

John Smith had done what he could to sustain the spirits of the battered colonists during that first harsh winter of 1607-1608. Now he set out to explore in detail the great bay to the north, and to search for a possible outlet to the South Sea and for the source of an Indian metal which he thought to be silver (but which turned out to be "fool's gold").

On June 2, 1608, Smith left Jamestown "in an open barge neare three tons burthen," in which he hoped "to performe his discovery with this company: Walter Russell, doctor of physicke, Ralfe Morton, Thomas Momford, William Cantrill, Richard Fetherstone, James Burne, Michell Sicklemore, Gentlemen [and] Jonas Profit, Anas Todkill, Robert Small, James Watkins, John Powell, James Read, Richard Keale, Souldiers."[4] The barge carried two sails, oars should the wind fail, a tarpaulin in case of rain, corn meal for bread, and drinking water in gourds. A log of "the accidents that happened in the discovery of the bay of Chisapeack" was to be maintained by Doctor Russell and Anas Todkill, while Smith himself was to make a rough map of the Bay and its rivers.

After sailing across the Bay to Cape Charles and up the eastern shore, the party came to a series of islands in Tangier Sound, the group of which were named after Doctor Russell. They are today's Tangier, Smith, Holland, Southmarsh and Bloodsworth Islands. Here Smith learned about a powerful and warlike tribe of Indians to the north called the Massawomeks, who were said frequently to raid smaller tribes on the Chesapeake tidewater. The Englishmen wasted no time in exercising a fruitful diplomacy, by offering the victimized natives the hope of a thorough (European-style) redress of their grievances in return for a barge full of provisions.[5]

Fighting swarms of mosquitoes on the lower eastern shore, rough seas and harsh weather, and facing a serious lack of fresh water, the explorers continued north through the "Straits of Limbo" (Hooper's Strait), passing the Calvert Cliffs and ultimately reaching a tributary which they called the "Bolus" after the red clay found on its shores. This was the Patapsco River——Smith and his men saw it many years before Lord Baltimore's colonists ever thought of starting a settlement there.

Several of the crew fell sick and urged their captain to return to Jamestown. Smith, reluctant to cut short the voyage, cajoled and consoled his sailors. A good measure of the man may be gleaned from his final exhortation:

> Regaine therefore your old spirits, for return I will not (if God please) till I have seen the Massawomeks, found Patawomek [the Potomac River], or the head of this water you conceit [think] to be endlesse.[6]

The crew found itself sufficiently inspired (and recovered) to carry on with the adventure of discovery and confrontation. Smith headed south along the western shore, and met more Indians:

> The 16th of June we fell with the river Patawomek [the Potomac], feare being gone, and our men recovered, we were all content to take some paines, to know the name of that seven-mile broad riuer: for thirtie myles sayle, we could see no inhabitants: then we were conducted by two savages up a little bayed creeke, towards Onawmanient, where all the woods were layd with ambuscados to the number of three or foure thousand salvages, so strangely paynted, grimed and disguised, shouting, yelling and crying as so many spirits from hell could not have shewed more terrible. Many bravados they made, but to appease their fury, our captaine prepared with as seeming a willingnesse as they to incounter them. But the grazing of our bullets upon the water (many being shot on purpose they might see them), with ecco of the woods so amazed them, as downe went their bowes and arrowes; (and exchanging hostage), James Watkins was sent six myles up the woods to their king's habitation. We were kindly used of those salvages, of whom we understood, they were commanded to betray us, by the direction of Powhatan, and he so directed from the discontents at James-towne, because our captaine did cause them stay in their country against their wills.[7]

One of the more interesting episodes of this first voyage reveals how Stingray Point came to be named. The expedition's supplies nearly spent, Smith and his men headed south for home. Near the mouth of the Rappahannock, the party espied a multitude of fishes lurking in the reeds. It was probably Anas Todkill who gave one of the first accounts of spearfishing in North American waters, and in this instance added its peculiar consequences:

> . . . [O]ur captaine sporting himself by nayling them to the grownd with his sword, set vs all a fishing in that manner: thus we tooke more in one houer than we could eate in a day. But it chansed our captaine taking a fish from his sword (not knowing her condition) being much of the fashion of a Thornback, but a long tayle like a riding rodde, whereon the middest is a most poysoned sting, of two or three inches long, bearded like a saw on each side, which she strucke into the wrist of his arme neare an inch and a halfe; no bloud nor wound was seene, but a little blew spot, but the torment was instantly so extreame, that in foure houres had so swollen his hand, arme, and shoulder, we all with much sorrow concluded his funerall and prepared his graue in an island by, as hemselfe directed; yet it pleased God by a precious oyle Doctor Russell at the first applyed to it with a probe, (ere night) his tormenting paine was so well asswaged, that he eate of the fish to his supper, which gaue no less joy and contant to vs than ease to himselfe, for which we called the island Stingray isle after the name of the fish.

The party returned to Jamestown on July 21, 1608. Within three days Smith embarked upon a second voyage with a new crew (Anthony Bagnell and Nathaniel Powell replaced Doctor Russell and Ralfe Morton, Edward Pising and William Ward replaced Robert Small, John Powell and James Read). It was on this expedition that the Massawomeks and the Susquehannoughs, mortal enemies one to the other, were encountered. Although peace was made with both tribes, there was some tension at the first meeting with the Massawomeks:

> . . . in crossing the bay we encountered 7 or 8 canowes full of Massawomeks, we seeing them prepare to assault us, left our oares and made way with our sayle to incounter them, yet were we but fiue with our captaine that could stand, for within two days after we left Kecoughtan, the rest (being all of the last supply,) were sicke almost to death, until they were seasoned to the country. Having shut them under our tarpawling, we put their hats upon stickes by the barges side, and betwixt two hats a man with two peeces, to make us seeme many, and so we thinke the Indians supposed these hats to be men, for they fled with all possible speed to the shore, and there stayed, staring at the sayling of our barge till we anchored right against them. Long it was ere we could draw them to come unto us. At last they sent two of their company unarmed in a canow, the rest all followed to second them if neede required. These two being but each presented with a bell, brought aboard all their fellowes; presenting our captaine with venison, beares flesh, fish, bowes, arrowes, clubs, targets, and beare skinnes.[9]

Before returning home once again, Smith and his men met and befriended an Indian names Mosco, who spoke English. It was he who suggested that the Indians' overt hostility towards white men was based upon the (well-grounded) fear that the strange visitors from the other side of the world would take away their lands. But Mosco helped the settlers fight against the Rappahannocks, and he was rewarded with a canoe-full of gifts.[10]

On September 7, 1608, Smith and his adventurers came back to Jamestown. Three days later the gallant Captain was elected President of the Virginia Council. The two voyages had provided abundant information about the navigable waters feeding into the Chesapeake Bay, especially the Potomac, Wicomico, Patuxent, Patapsco, Rappahannock and Susquehanna Rivers.[11]

After John Smith, the first third of the seventeenth century saw at least a half-dozen other pioneers who were to contribute substantially to George Calvert's recognition of the Bay's tremendous colonial and mercantile potential. Among them were Captain Henry Hudson, who in 1609 sailed through the Chesapeake in his search for a northeast passage to India,[12] and Captain Henry Fleet, who gained reknown on both sides of the Atlantic as a frontier guide and interpreter.

For a number of years Captain Fleet was held prisoner by the Indians, in which time he learned well their customs and languages.[13] He spent much time sailing the Chesapeake and Potomac, and his observations and experiences remain no less colorful than those of John Smith. Fleet was much more materialist than explorer, however, and he was more concerned with trading for furs than with charting new territory. In the late summer of 1632 he again left Jamestown for the rich country to the north.

> The 29th of August we came to Patomack; here was I tempted to take in corn and then to proceed for New England; but wanting truck, and having much tobacco due to me in Virginia, I was unwilling to take any irregular course, especially in that I conceived all my hopes and future fortunes depended upon the trade and traffic that was to be had out of this river.
>
> I took in some provisions, and came down to a town called Patobanos [probably Port Tobacco], where I found that all the Indians below the cannibals, which are in number five thousand persons in the river of Patomack, will take pains this winter in the killing of beavers and preserve the furs for me now that they begin to find what benefit may accrue to them thereby. By this means I shall have in readiness at least five or six thousand weight against my next coming to trade there.[14]

Fleet later helped Leonard Calvert settle his Maryland colony. He prospered for a number of years as the leading mercantile entrepreneur on the Chesapeake Bay, until William Claiborne made his appearance in 1627.

* Notes *

V. SMITH'S VOYAGES OF EXPLORATION

1. 1 SMITH 114.
2. 1 SCHARF 1-5. In 1609 the colony was rechartered as the Virginia Company which three years later secured a new charter that included the Bermudas and which placed control of the colony in stockholders. J.H. CLAIBORNE, WILLIAM CLAIBORNE OF VIRGINIA 44 (1917). For a comprehensive treatment of the land grant system in colonial Virginia, see Miller v. Commonwealth, 159 Va. 924, 166 S.E. 557 (1932).
3. G. BYRON, EARLY EXPLORATIONS OF THE CHESAPEAKE BAY 10-11 (1960). For additional treatments in depth of the Pocahontas story, see W.G. SIMMS, THE LIFE OF CAPTAIN JOHN SMITH 143 *ff*. (1867); H. WHARTON, THE LIFE OF JOHN SMITH 72 (Striker transl.); and P. LEWIS, THE GREAT ROGUE 171 *ff*. (1967).
4. 1 SMITH 173.
5.

> Being thus refreshed in crossing over from the maine to other isles, we discovered the wind and waters so much increased with thunder, lightning and raine, that our mast and sayle blew overboard, and such mighty waves overracked us in that small barge, that with great labour we kept her from sinking, by freeing out the water . . . . Repairing our saile with our shirts, we set sayle for the maine and fell with a pretty convenient river on the East called *Cuskarawaock*, the people ran as amazed in troups from place to place, and divers got into the tops of trees. they were not sparing of their arrowes, nor the greatest passion they could expresse of their anger. Long they shot, we still ryding at an anchor without their reatch making all the signes of friendship we could. The next day they came unarmed, with every one a basket, dancing in a ring to draw us on shore, but seeing there was nothing in them but villany, we discharged a volley of muskets charged with pistoll shott, whereat they all lay tumbling on the ground, creeping some one way, some another

> into a great cluster of reedes hard by, where thare companies lay in ambuscade. Towards the evening we wayed, and approaching the shoare, discharging five or six shot among the reedes, we landed where there lay a many of baskets and much bloud, but saw not a salvage. A smoake appearing on the other side the river, we rowed thither, there we left some peces of copper, beads, bells and looking-glasses, and then went into the bay, but when it was darke we came back againe. Early in the morning four salvages came to us in their canoes, whom we used with such courtesie, not knowing what we were, nor had done, having beene in the bay a fishing, bade us stay and ere long they would returne, which they did and some twentie more with them; with whom after a little conference, two or three thousand men, women and children, came clustering about us, every one presenting us with something, which a little bead would so well requite, that we became such friends they would contend who should fetch us water, stay with us for hostage, conduct our men any whither, and give us the best content. Here doth inhabite the people of *Sarapinagh*, *Nause*, *Aroeck*, and Nantaquak, the best marchants of all other salvages. They much extolled a great nation called Massawomekes, in search of whom we returned by Limbo . . .
>
> —1 SMITH 174.

6. *Id*. at 177.

7. *Id*. at 177.

8. *Id*. at 179.

9. *Id*. at 181-182.

10. G. BYRON, *supra* note 3 at 17-18.

11. *See* 1 SMITH 118 *ff*. Other descriptions of Smith's adventures may be found in BREWINGTON 1-2; WILSTACH 29-34; and R.M. BURGESS, THIS WAS CHESAPEAKE BAY 4-6 (1963).

    Much has been written about John Smith's life and times. For several good and more recent biographies, see P.L. BARBOUR, THE THREE WORLDS OF CAPTAIN JOHN SMITH (1964); P. LEWIS, THE GREAT ROGUE (1967); and BRADFORD SMITH, CAPTAIN JOHN SMITH: HIS LIFE AND LEGEND (1953).

12. *See* 1 SCHARF 230.

13. When he came to write a journal of his adventures, Fleet was nearly apologetic for his proficiency with the Indian tongue:

> And so, beloved friends, that shall have the perusal of this journal, I hope that you will hold me excused in the method of this relation, and bear with my weakness in penning the same. And consider that time would not permit me to use any rhetoric in the form of this discourse, which, to say truly, I am but a stranger unto as yet, considering that in my infancy and prime time of youth, which might have advantaged my study that way, and enabled me with more learning, I was for many years together compelled to live amongst these people, whose prisoner I was, and by that means am a better proficient in the Indian language than mine own, and am made more able that way.
>
> —From HENRY FLEET, A BRIEF JOURNAL OF A VOYAGE MADE IN THE BARK VIRGINIA AND OTHER PARTS OF THE CONTINENT OF AMERICA (as quoted in E.D. NEILL, THE FOUNDERS OF MARYLAND 36-37 (1876)).

14. Id. at p. 35.

VI.

THE FOUNDING OF MARYLAND

"... the most extraordinary delegation
of power granted to any English subject since the
creation of the border palatinates of previous centuries."

The Chesapeake Bay country blossomed slowly during the second and third decades of the seventeenth century. In 1617 the eastern shore of what is now Maryland acquired its first permanent white resident. He was named, appropriately enough perhaps, Thomas Savage; having moved from Virginia with his wife, he was to prosper "raising corn and progeny."[1] A few years later (in 1625), one of the earliest English settlements was made miles to the north at the mouth of the Susquehanna River, after Edward Palmer purchased the island now bearing his name, with the idea of founding a university there.[2] In the late 1620's, trading posts were established on Kent and Palmer Islands by the Virginian, William Claiborne, about whom much will be said later.

It was around this time that an active interest in the Bay area was taken by George Calvert, the first Lord Baltimore and the founder of Maryland. Calvert has often been hailed as a man of great political insight, patient understanding and strong moral fibre. Distinguished historians have reserved for him high praise: he was a self-made statesman-philosopher, one of the first in the Christian world to seek religious security and peace by the practice of justice more than by the exercise of power, and by the establishment of popular institutions within an environment of liberty and conscience. And the country of the Chesapeake Bay "was the spot where in a remote corner of the world, on the banks of rivers which as yet had hardly been explored, the mild forbearance of a proprietary, adopted religious freedom as the basis of the state."[3]

Calvert had served as England's Secretary of State under King James I. Shortly after the death of his first wife he converted to Catholicism, and when British persecution of Catholics became severe, he affirmed his faith by bowing out of office. The first Lord Baltimore then looked to find a haven for those persecuted because of their religious beliefs. His ill-fated attempts to colonize in Newfoundland seemed to do little more than increase a fervent desire to establish a sanctuary in the New World.[4]

In 1629, Calvert visited Jamestown with the unstated but obvious intention of scouting new territory for his colony. He was not warmly received. Most Virginians were jealous of their territorial rights and hard-worked lands, and did not cotton to any newcomer with competing aspirations, be he commoner or lord. Thus we read that one Thomas Tindall, "for giving my Lord Baltimore the lie and threatening to knock him down," was sentenced to two hours in the pillory.[5] One of the more hostile of the official hosts was Claiborne, the prosperous trader with vested political interests in Virginia. In his fanciful though factually-based novel, The Sot-Weed Factor, John Barth tells of Calvert's reception in Virginia. Here Charles Calvert, the third Lord Baltimore, recounts the incident for Ebenezer Cooke, Maryland's first poet-laureate:

> . . . he [George Calvert] was met by Governor Pott and his Council (including the blackguard William Claiborne, archenemy of Maryland, who for very spleen and treachery hath no equal in the history of the New World), all of 'em hostile as salvages and bent on driving Grandfather away, for fear Charles would grant him the whole of Virginia out from under 'em. As if he were some upstart and not late Privy Councillor to the King, they pressed him to swear the oath of supremacy, knowing full well that as a good Catholic he would perforce refuse. Not e'en the King had required it of him, and 'twas in the authority of neither Pott nor Claiborne nor any other rascal in Virginia to administer it, but demand it they did, nonetheless, and were like to set bullies and ruffians upon him when he would not swear't.[6]

Claiborne was either dispatched or went on his own accord as a lobbyist to England for the purpose of preventing confirmation to Calvert of lands south of the James River, in the Carolinas.[7] In a gesture of compromise, Calvert withdrew the King's bill granting him the Carolina territory before it was given the privy seals, and a second grant for what is now the eastern shore peninsula was withheld by the Privy Council after vigorous objections by the Virginians.[8] While he was at it, Claiborne obtained a license under the hand of King Charles to trade in all seas in or near the country around Virginia.

Besides the Carolinas, however, Calvert was also favorably impressed with the climate and bountifulness of the Chesapeake Bay and its hinterlands. He submitted an alternative petition for these regions north of Virginia, to which the King promptly acquiesced. But before this final charter received its seal, the first Lord Baltimore died, never to set foot upon his promised land.

The new grant passed immediately to George Calvert's son Cecilius, the second Lord Baltimore. When the charter went through the Privy Council and was published, on June 30, 1632, Cecilius inherited all the rights attendant to the palatinate. These were, to put it mildly, extensive. "The Province of Maryland was the largest land grant ever made by a sovereign of England to an individual subject . . . the most extraordinary delegation of power granted to any English subject since the creation of the border palatinates of previous centuries."[9]

In brief, the Charter of Maryland invested the Lord Proprietary with the territorial rights to all lands, waters and natural resources within the province, in perpetual possession to himself and his heirs; with the legislative and judicial rights to make and enforce public and private laws and to establish courts of justice; with the regal rights to confer titles, erect towns, and pardon offenses; with the ecclesiastical rights to establish churches (in accordance with the laws of England); with the military rights to declare and wage war; and with the financial rights to alienate lands and levy duties and tolls.[10] It has been suggested that all of these powers taken together represented a return to feudal and baronial ideals of land tenure and government, leaving Maryland the most extreme of the proprietary colonies in America.[11]

So it was that on March 25, 1634, the first Maryland settlers anchored their two small pinnaces, the Ark and the Dove, at St. Clement's Island (now Blackiston Island) on the shores of the Chesapeake Bay. At their command was Leonard Calvert, Cecil's brother and the governor-designate for the province. Not long after the colonists went ashore, Father Andrew White assembled them for the first mass to be celebrated in this haven for the persecuted.[12]

Leonard Calvert wasted little time before he attached Captain Henry Fleet to the expedition. Using Fleet's knowledge of both the land and its people, a quick peace was negotiated with the chief of the Piscattaway and Patuxent Indians. The settlement was then moved a short distance from St. Clement's Island to a spot on the St. Mary's River, which had "two excellent bayes, wherein might harbour three hundred saile with great safetie."[13] Here the roots of St. Mary's City, which was to remain the capitol of Maryland for the next sixty years, took firm hold.

* Notes *

VI. THE FOUNDING OF MARYLAND

1. E.S. Miers, The Drowned River: The Story of Chesapeake Bay 20 (1967).
2. WILSTACH 180.
3. G. BANCROFT, 1 HISTORY OF THE UNITED STATES 244 (1864).
4. Some writers have suggested a less popular theory, that Calvert's first consideration in asking for a new charter was to offset the financial loss occasioned by the failure in Newfoundland, and that the wish to establish a refuge for Catholics was but secondary. *See* P.G. SKIRVEN, THE FIRST PARISHES OF THE PROVINCE OF MARYLAND 3 (1923); E. ALLEN, MARYLAND TOLERATION 18 (1855) and, *generally*, K.L. Lasson, *Religious Freedom and the Church-State Relationship in Maryland*, 14 THE CATHOLIC LAWYER 6-7 (1968).
5. J.H. LATANÉ, THE EARLY RELATIONS BETWEEN MARYLAND AND VIRGINIA 8-9 (1895).
6. JOHN BARTH, THE SOT-WEED FACTOR 91 (paperback ed. 1960) (hereinafter cited as BARTH).
7. *See* LATANÉ, *supra* note 5 at 9; W.H. BROWNE, MARYLAND: THE HISTORY OF A PALATINATE (1899); and J.H. CLAIBORNE, WILLIAM CLAIBORNE OF VIRGINIA 62 (1917). The latter insists that Claiborne was sent to London "to keep an eye on the wily nobleman [Baltimore] and thwart his purposes and schemes." CLAIBORNE, *supra* at 62.
8. N.C. HALE, VIRGINIA VENTURER, 169 (1951) and 1 SCHARF 50.
9. F.S. McGRATH, PILLARS OF MARYLAND 44 (1950) (Citing Matthew P. Andrews). For a study of the breadth of the palatinate, see *id.* at 44-48.
10. 1 SCHARF 61. A copy of the Charter of Maryland may be found at 1 SCHARF 53-60.

11. L.B. WRIGHT, THE ATLANTIC FRONTIER 65 (1947).

12. The site is now commemorated by a large white cross. *See* pp. 32-33 in Father White's Journal. *See also infra* under "Kent Island and Claiborne," at 27.

13. HALE, *supra* note 8 at 178.

VII.

KENT ISLAND AND WILLIAM CLAIBORNE

"Claiborne returned to Virginia . . . now that force, fraud and complaint had failed in effecting his purpose, there remained to him but the spirit of deadly animosity towards the colony, waiting only the opportunity for revenge."

"[N]ot one of his descendants should take aught to himself but honour from the fact that the blood of that virile Englishman runs in his veins."

Few men in the history of the Chesapeake Bay have engendered more contrasting perspectives than William Claiborne of Virginia. His strong personality at once provoked animosity and cajoled devotion, the result often depending largely upon whether a particular commercial or political relationship was mutually beneficial.

Maryland historians generally have relegated him to a position of infamy, while Virginians (particularly his lineal descendants, of whom there are many) assure him the status of a patriot. As noted before, Claiborne was one of the prime spokesmen against Calvert's efforts to establish a colony either north or south of Jamestown. For this reason he was early established as an "archenemy of Maryland, who for very spleen and treachery hath no equal in the history of the New World."[1] Other writers are no less vindictive. Claiborne's resistance to Lord Baltimore's authority is said to have been "unjustifiable, seditious, and subversive of all just government."[2] When he was "baffled in his attempts to obtain redress, Claiborne returned to Virginia . . . and now that force, fraud and complaint had all failed in effecting his purpose, there remained to him but the spirit of deadly animosity towards the colony, waiting only for the opportunity of revenge."[3] This is the same man about whom still other biographers have written with considerably more admiration and charity:

> His descendants in men and women have been estimated at many thousands. Amongst them have been those who have served their country in the halls of Legislature, as governors, as orators, soldiers, sailors, in the law, in medicine, and in the ministry. The names of many are written on the imperishable records of American manhood, achievement, and valour, and though he has been villified and defamed unjustly by enemies dead and alive, not one of his descendants should take aught to himself but honour from the fact that the blood of that virile Englishman runs in his veins.[4]

The debate over whether Claiborne was hero or villain sometimes beclouds the undisputed certainty of his importance to the early history of Maryland and the Chesapeake Bay. Claiborne was thirty-four years old when he sailed for the New World in 1621-1622. Soon after arriving in Virginia, he began trading with the Indians on the shores of the Chesapeake. In 1627 Governor Yeardley of Virginia gave him authority to explore the Bay from the thirty-fourth to the forty-first parallel, and in that same year a royal license was issued granting him power to trade "in, nere, or about those parts of America for which there is not already a patent granted to others for the sole trade."[5]

In 1632, three years before the Ark and Dove set anchor in Maryland, Claiborne set out to investigate the northern reaches of the Bay (following John Smith's original trail). Eventually he came to a large island 125 miles north of Jamestown, off the eastern shore between what are now the Chester and Miles Rivers. Here the level fields of grass and broad forests reminded him of his native Kent, and the proximity of the Wicomese and Matapeake Indians offered the attraction of potentially profitable trade. In the space of two years a small trading post was established and a settlement started to grow on the southern shore of Kent Island. Shortly after, Claiborne set up a similar station on Palmer's Island at the mouth of the Susquehanna River and quickly affirmed friendly relations with the giant Susquehannough Indians.[6]

As the first settlers at Jamestown found it difficult to live during those early years in the New World, so the colonial traders on Kent Island encountered frustration and hardship in excessive proportion to their small number. Claiborne financed the trading post with the help of his majority partners in London—William Cloberry, John Delabarr and David Moorhead—Cloberry promising the Virginian he would use his political influence to obtain a patent to Kent Island under the broad seal of England. But there was little that could be done in London to prevent the extensive fire which on October 18, 1631, nearly wiped out the tiny Chesapeake settlement. By 1632, the colony on Kent had been restocked and planted, there was a mill and court-house, regular trade had begun with the Indians, and the Island was being represented in the Virginia Assembly by Captain Nicholas Martin.

When the news reached Jamestown that George Calvert had been granted the Chesapeake Bay territory, there were some Virginians who had doubts about their continued jurisdiction over Kent Island. Most, however, were confident that Kent was not embraced by the Maryland Charter, especially in view of Claiborne's trading post there and the language in the Charter that Lord Baltimore was being given lands "hitherto uncultivated" (hactenus inculta).[7] The old Virginia Company nevertheless persisted in its opposition to the Charter, as it had objected to the earlier grants to Calvert which he had withdrawn.[8] Virginia obtained legal opinions that the King's gift of plenary powers to Baltimore was a dangerous precedent. The King sent the matter to his Privy Council, asking for a declaratory judgment. On July 3, 1633, the Council returned its recommendation to the effect that Baltimore be left with his Charter, and other claimants to their remedies at law.

This should have closed the case, but as late as November of 1633 the Virginians were still petitioning for exclusive rights to Kent Island. In early

March of 1634 Claiborne, who by now had become Secretary of State for Virginia, appealed to the Virginia Council for guidance; in turn he received that body's partisan support for his various claims of right. Meanwhile, Cloberry and Company continued to maneuver behind the scenes by attempting to deal privately with Cecil Calvert in London, while discreetly reminding Claiborne of the partnership's viability.

When Leonard Calvert arrived with the Ark and Dove in the spring of 1634, he depended upon a letter from the King commanding the Jamestown colonists to render whatever assistance was necessary to the fledgling Marylanders. Leonard did not expect a warm welcome. His brother Cecilius had counseled against sailing too close to the newly placed guns at Point Comfort. The advice appeared well taken when the Virginians apparently mistook the two small pinnaces for Spanish ships, and challenged the strangers for a tense two hours before admitting them. Then Calvert went ashore, where he was received cordially by the Governor of Virginia, Sir John Harvey.

Cecilius Calvert had also instructed his brother that, if Claiborne should offer resistance and reject Baltimore's authority, the Virginian should be left unopposed for at least one year. But Claiborne's open refusal, both to confess himself a Maryland subject or to acquire a license from Calvert to trade in the Chesapeake Bay, probably pushed Leonard into forcing the issue earlier than suggested. He made the points clear that the Kent Island station was within the precincts of the Lord Proprietor of Maryland, that the settlers thereon could remain only as tenants, and that a license to trade would be required. Unfortunately, little mention was made of the fact that Cloberry had already subjugated himself and the partnership to Cecilius: in England he was petitioning the second Lord Baltimore for a sub-grant of Kent Island, while at the same time making light of Claiborne's interest. Cecilius, however, expressed his wish to forbear until a working agreement could be negotiated with Claiborne.[9]

Several months after the Marylanders arrived, Captain Henry Fleet accused Claiborne of inciting various tribes of Indians into hostile acts against the new settlers. Calvert complained to the Governor of Virginia, who put Claiborne under bond not to leave Jamestown until the charges had been thoroughly investigated. On June 20, 1634, duly appointed commissioners from Maryland and Virginia met at Patuxent to interview the King of the Patuxents concerning Fleet's charges. According to some historians, the result was a complete exoneration of the Virginia trader;[10] others think the indictment had more substance.[11]

It took a long time for news to travel between England and the colonies, and this sometimes caused misunderstandings of no small consequence. Hearing the rumors that Claiborne had aroused the Indians against his colony, Cecil Calvert in early September of 1634, sent orders for Leonard to seize Kent Island and arrest Claiborne.

Governor Harvey of Virginia sided with the Lord Baltimore and removed Claiborne from his position as Secretary of State of Virginia. No doubt Harvey acted out of political expedience, but his decision quickly made him unpopular with most Virginians. King Charles seemed hopelessly caught in between, apparently wishing to appease both Claiborne and Baltimore even though their interests were in essence contradictory. The King wrote a letter to Harvey thanking him for his assistance and encouragement to the Maryland colonists. A few days later, however, Charles issued a royal sign manual saying that Baltimore's interference with the planters on Kent Island was "contrary to justice and to the true intention of our grant to the said Lord . . . ."[12] Harvey concealed the second message, later claiming he thought that it was either a forgery or had been surreptitiously obtained by Claiborne's friends.[13]

Despite the King's efforts at long-distance arbitration, traders from Kent and colonists from Maryland soon found occasion for a direct confrontation. Captain Thomas Smith and the new pinnace Long Tayle (the first built on the Chesapeake) were taken captive on open waters by Calvert's representatives, who construed the King's letters as restricting Claiborne's trade to the boundaries of Kent Island. On April 23, 1635 an incensed Claiborne dispatched thirteen men on the Cockatrice under Lieutenant Radcliffe Warren, to retake the Long Tayle (Thomas Smith had since been returned) and to capture one of Baltimore's large pinnaces. They were met in the Pocomoke River off the eastern shore of the Bay by two of Calvert's ships, the St. Margaret and the St. Helen, under the command of Captain Thomas Cornwallis. The ensuing skirmish, which left four dead and many wounded, was the first naval battle ever fought in the New World.[14]

Cornwallis again met Thomas Smith on May 10th and this time charged him with various acts of piracy. The next day Claiborne ordered his men to retake the Long Tayle, without bloodshed if possible. The history of this second encounter between Virginia and Maryland is unclear, but the result was a temporary settlement of hostilities, with Claiborne left in undisputed possession of Kent Island for several more years.[15]

In the meantime the Virginians, having become completely vexed at Governor Harvey for his failure to support the Kent Islanders, repudiated his authority and ultimately forced him to depart for England. Claiborne himself apparently eluded the Maryland authorities by returning to Virginia.

Towards the end of 1636, Cloberry and Company sent George Evelyn to Kent Island. Evelyn had bought out the one-sixth share in the partnership formerly owned by John Delabarr, and was to take charge of the company's fur trading business in the Chesapeake. Claiborne, meanwhile, was to sail for England, where he would recount his troubles for the partners and report on profits and losses. Before leaving for London, Claiborne made sure that Palmer's Island was fortified.

He was unable, however, to extract from Evelyn an assurance that he would maintain the status quo on Kent. And as soon as Claiborne left, Evelyn began a methodical dispossession of the Virginian's interest, and negotiations with Leonard Calvert. Evelyn presented the Kent Islanders with an ultimatum: if they refused to yield to the government of Maryland, the Island might be taken by force. Thomas Smith and John Butler were adamant in their refusal to surrender the Island, and Calvert was left with little choice but to order them arrested. But Evelyn, without the support of the other Islanders, was unable to make the arrests.

Leonard Calvert now found himself in an awkward position, his offers for appeasement totally rejected. Suspicious that Smith and Butler were planning to incite the Susquehannocks against the colonists at St. Mary's, he set out to reduce Palmer's Island. On February 12, 1638 a Bill of Attainder was drawn against Claiborne for crimes committed by his Cockatrice three years earlier. Now, with Evelyn's assistance and direction, Kent Island was taken and Claiborne's plantation and personal property there were attached by Cloberry and Company pending the outcome of Calvert's indictment against him. Smith and Butler were arrested and brought to trial before the legislative assembly, which was acting as a court of justice. Smith was convicted of piracy and sentenced to death, although Calvert forbore from ordering his execution and let Butler off with a milder censure. By virtue of the Bill of Attainder against him, Claiborne was made an outlaw and all of his property in the Chesapeake Bay was seized. As a final gesture, Palmer's Island was reduced and its spoils divided.

Claiborne had by now arrived in England. After he learned of the reduction of both Kent and Palmer's Islands, he petitioned the King for redress of the wrongs and injuries that he and the Cloberry partnership allegedly had sustained. Calvert in the meantime had submitted his own petition, asserting that Claiborne was a pirate and murderer and requesting a reaffirmation of the 1633 order leaving the Baltimores to their Charter and Claiborne to his remedies at law. The King referred Claiborne's petition to his commissioners of plantations, who in turn recommended that the matter again be treated strictly as a private quarrel between Claiborne and the Calverts. On April 4, 1638 the commissioners issued their report, which stated that—

> . . . the Right & Tytle to the Ile of Kent & other places in question to be absolutely belonging to the Lord Baltimore, & that noe Plantation or Trade with the Indians ought to be within the precincts of his patent without Lycence from him. Did therefore likewise thinke fitt & declare, that noe Grannt from his Majesty should passe to the said Clayborne or any others of the said Ile of Kent, or any other parts or places within the said Pattent Whereof his Majesty's Attorney & Soliciter generall are hereby prayed to take notice. And concerning the Violences & wrongs by the said Clayborne & the rest complayned of in the said Petition to his Majesty their Lordshipps did now allso declare, that they found no cause att all to relieve them, butt doe leave both sides to the ordinary course of Justice.[16]

Two weeks later, Claiborne appeared before Sir Henry Marten, Judge of His Majesty's High Court of Admiralty, and successfully defended himself against Lord Baltimore's charges of piracy and murder. Having by now become aware of Cloberry's surrepititious compromising, Claiborne started to reexamine his business interest. But in the midst of various civil suits and counter-suits for libel filed by him and the partnership, the outcomes of which have remained unclear, more felicitous news came for the Virginian. The Providence Company had granted him the Island of Roaten (now Rich Island) off the coast of Honduras. And on July 14, 1638, King Charles issued another mild censure and approbation to Lord Baltimore after word came that his agents had "slain three of our subjects" on "Kentish Island."[17]

Nevertheless, Calvert's title to Kent had been reaffirmed and was being generally accepted. Back in the colonies, the Governor and Council of Virginia issued a proclamation, on October 4, 1638, recognizing "the right and title to the Isle of Kent & other places in question to bee absolutely belonging to Lo: Baltimore."[18]

All was not finished, however, as far as William Claiborne was concerned. It is difficult to say whether the King acted out of a spirit of conciliation or in one of affection when in 1642 he made Claiborne Treasurer of Virginia for life. Several years later, while the Calverts were becoming embroiled in the Puritan controversy, the Virginian saw an opening to retake his old Island. But now, because he realized full well that the stability of Leonard Calvert's palatinate was at best precarious, Claiborne chose a more prudent, non-violent course of action.

Earlier that year Calvert had once again declared Claiborne to be an enemy of the province,[19] but the declaration had a hollow ring. After the two-year rebellion against Lord Baltimore's authority (touched off by Richard Ingle), Claiborne repossessed Kent Island. He was not to be expelled until 1646. Meanwhile, it took all of Cecil Calvert's influence in Parliament to retain the Maryland Charter. And in June of 1647, in tenuous possession of Maryland and Kent Island, Leonard Calvert died.

Claiborne persisted nonetheless, and in 1649 submitted "A Declaration shewing the illegality and unlawfull Proceedings of the Patent of Maryland."[20] The Maryland Assembly responded in 1650 with an act decreeing that anyone who should "assist, abett, or countenance Claiborne in any attempt against the Island of Kent, or any place within this Province . . . shall be punished by death and confiscation of all his Lands, goods and chattels."[21]

In the early 1650's there was a good deal of political turmoil in England and in the colonies. For a brief period in 1652 William Claiborne actually found himself the governor pro tem of Maryland while serving at the same time as Virginia's Secretary of State. However, under a 1657 compromise in which Maryland and Virginia resumed an amicable relationship, Kent Island became once and for all within the jurisdiction of Lord Baltimore.[22]

William Claiborne died in 1677 at the age of ninety years. According to the theory of the still active Claiborne protagonists, he had based his claim to Kent Island solely on grounds of prior occupancy and purchase from the Indians, and not on a royal grant. It is claimed further that the two major objections to Claiborne's title to Kent are without merit: first, the fact that the original charter to the London Company which granted Chesapeake territory had been annulled did not affect the Colony's rights to settle lands originally granted, if they hadn't already been alienated; and second, even though the Virginia Council never granted Kent Island to Claiborne, it nevertheless was consistent in its recognition of his rights and title there. Moreover, the charter to Baltimore was for lands "not yet cultivated" and Claiborne had planted Kent Island at least one year before the *Ark* and *Dove* set anchor.[23]

Advocates who claim that Calvert's title to Kent was whole and unencumbered assert that Claiborne "could not rest his title on the ground of prior occupancy, for . . . his license from the king went no further than a permission to trade, which might have been granted to a citizen of a foreign state" and that "the instant . . . Maryland, was granted by King Charles to Lord Baltimore, Kent Island and Claiborne . . . became subject to his jurisdiction and authority."[24] Or, as Charles Calvert might have argued to the poet laureate Ebenezer Cooke—

> *[H]actenus inculta* was meant as mere description of the land; 'tis the common language of charters, and not intended as a condition of the grant. And truth to tell, Claiborne's traders had not tilled the Island at that: they bartered their ware for corn to live on as well as furs for Cloberry and Company.[25]

All of the debates, of course, are purely academic—one might even wonder what all the fuss was ever about. Although there was a small fur trade and shipbuilding business on Kent Island, never so much as a township developed there—only a fort, windmill, church and small plantation—and the living was hard.[26]

Perhaps the most reasonable commentary on the whole lengthy episode was offered by one of Claiborne's many Virginian descendants. "Measured dispassionately in the light of the actual record and against the historical background of the time and place of his life," Claiborne was neither villain nor hero in his long struggle with the Calverts. "He simply fought a good fight and lost it to an antagonist better equipped for such a contest."[27]

* Notes *

VII. KENT ISLAND AND WILLIAM CLAIBORNE

1. BARTH 91.

2. G.W. BURNAP, LIFE OF LEONARD CALVERT, FIRST GOVERNOR OF MARYLAND 105 (9 The Library of American Biography, 2d series 1846).

3. 1 SCHARF 119-20.

4. J.H. CLAIBORNE, WILLIAM CLAIBORNE OF VIRGINIA 200 (1917) (hereinafter cited as CLAIBORNE). The following appears at 201:

> He was a clever and resourceful politician, an accomplished courtier who knew how to wear the silken glove over the iron hand; a man of powerful magnetic and compelling personality, who bound his friends to him with hooks of steel, harassed and exasperated his enemies with undying pertinacity, and met aggression with aggression, reprisal with reprisal. He was proud, imperious, persistent, indomitable; he loved Virginia with a burning love that still lives in the hearts of his descendants. He was the champion and defender of her territorial rights, of constitutional and personal liberty, and, finally, was essentially and altogether human.

5. 3 ARCHIVES OF MARYLAND 2d. See also 1 SCHARF 99-100; J.H. LATANÉ, THE EARLY RELATIONS BETWEEN MARYLAND AND VIRGINIA 10 (1895); and N.C. HALE, VIRGINIA VENTURER 117 (1951) (hereinafter cited as HALE).

6. See HALE, supra note 5 at 117-26, LATANE, supra note 5 at 10, 1 SCHARF 100, and WILSTACH 36-37.

7.

> Kent Island was certainly settled and cultivated, and the true God made known to the natives there, reasoned the Virginians. They had no intention of giving over to these Papists either the Island or the fur trade it controlled. HALE 176.

8. See under "The Founding of Maryland", fn. 8 and accompanying text.

9. HALE 175-76.

10. CLAIBORNE 73-74; HALE 179-81.

11. 1 SCHARF 106.

12. LATANE, *supra* note 5 at 18. *See also* CLAIBORNE 76-78, 1 SCHARF 106, and HALE 190, 195-96. It has been suggested that the reason for Claiborne's continued favor with Charles I is that the latter "was easily misled." *See* BARTH at 93.

13. 3 ARCHIVES OF MARYLAND 34.

14. *See* HALE, *supra* note 5 at 196-202; 1 SCHARF 109-10; and CLAIBORNE 80-81.

15. 1 SCHARF 110; CLAIBORNE 80-81; and HALE 203-06.

16. 3 ARCHIVES OF MARYLAND 72-73. *See also* HALE 227 *ff*. and 1 SCHARF 115-18.

17. 3 ARCHIVES OF MARYLAND 78-79. *See also* HALE 232 *ff*.

18. 3 ARCHIVES OF MARYLAND 79-80. *See also* HALE 234-35 and 1 SCHARF 119. Soon after Calvert secured the Island he awarded the manor lands to Giles Brent, whose heirs retained it for 145 years. The area is now known as Chew's Gardens. WILSTACH 122.

19. 3 ARCHIVES OF MARYLAND 161-62. *See also* N.C. HALE 258.

20. 5 ARCHIVES OF MARYLAND 174-81.

21. 1 ARCHIVES OF MARYLAND 288.

22. In 1677 Royal Commissioners came from England to straighten out the political situation in Virginia following Bacon's Rebellion. The Commissioners recommended that the King assume the government of both Virginia and Maryland, whereupon Virginia renewed its original territorial claims. On March 13, 1677, Claiborne submitted one last petition to regain Kent and Palmer's Island in the Chesapeake Bay. This last gasp seems to have been given a pocket veto by the King: no historical evidence can be found about the plea's disposition. *See* 5 ARCHIVES OF MARYLAND 155 *ff*.; HALE 312-15; and CLAIBORNE 127.

23. *See* CLAIBORNE 52-53. Hale points out that a similar territorial dispute between Pennsylvania and Maryland a half-century later was decided in William Penn's favor, on the basis of an "uncultivated land" clause. Penn was thereby awarded the territory which later became Delaware. HALE 227 *ff*.

24. 1 SCHARF 104.

25. BARTH 94.

26. In the early years the Island's resident physician, Dr. Pott, had his hands full fighting various sicknesses, and the other residents had to contend with Marylanders and savages, HALE 182.

27. HALE 315. For additional perspectives on the struggle between Claiborne and the Calverts, see E.D. NEILL, THE FOUNDERS OF MARYLAND 38-58 (1876) and L.B. WRIGHT, THE ATLANTIC FRONTIER 77-78 (1947).

VIII.

RESOURCES OF THE BAY

"This . . . without all question, is the most pleasant and healthful place in all this country, and most convenient for habitation, the air temperate in summer and not violent in winter. It aboundeth with all manner of fish . . . . And as for deer, buffaloes, bears, turkeys, the woods do swarm with them . . . "

Perhaps the main reason why Kent Island was so fervently contested was because of its fortuitous geographical position at the center of a magnificently bountiful Chesapeake Bay. There is no question that the settlers of Maryland and Virginia were attracted by the climate and resources of the Chesapeake, and there is little doubt that those substantial graces were primary to the rapid growth and development of the two Middle Atlantic provinces in population, prosperity and preeminence among the original American colonies.

Early visitors called it the "Noblest Bay in the Universe" and "the Mediterranean Sea of America." Of its 4,612 miles of tidal shoreline and forty-eight principal rivers it was said that "no Country in the World can be more curiously watered."[1] One newcomer, enraptured with the great natural wealth of the Bay, described it as a place "beautified by God, with all the ornaments of nature, and enriched by his earthly treasures."[2] Still another offered, "Neither do I think there is any place under Heavenly altitude . . . that can parallel this fertile and pleasant piece of ground in its multiplicity, or rather Natures extravagancy of a super abounding plenty."[3] But Father Andrew White, sailing with the Ark and Dove, expressed it with a more simple eloquence, saying "You will scarcely find a more beautiful body of water."[4]

Few modern Baltimoreans would endorse the characterization of the Bay area's climate as "serene and mild, not oppressively hot like that of Florida and old Virginia, nor bitter cold like that of New England: but preserves, so to speak, a middle temperature between the two, and so enjoys the advantages, and escapes the evils, of each."[5] But seventeenth and eighteenth century Marylanders for the most part did count the Chesapeake weather among their blessings. Captain John Smith wrote that "heaven and earth never agreed better to frame a place for man's habitation."[6] William Byrd, a Virginia merchant in the late 1600's, thought the climate to be—

> most charmingly delightfull, with a fine Air and a Serene Sky that keeps us in Good Health and Good Humour. Spleen and vapours are as absolute Rarities here as a Winter's Sun, or a Publick Spirit in England. A man may eat Beef, be as lazy as Captain Hardy, or even marry in this Clymate, without having the least Inclination to hang himself.[7]

Other early descriptions of Chesapeake weather, however, might be more compatible with the impressions of twentieth century Marylanders. Midsummers then as now tended to be hot and humid. A newly arrived Anglican clergyman wrote back to a friend in England that the heat of Virginia "fevers the Blood and sets all the animal Spirits in an Uprore."[8] John Smith noted that "the Sommer is hot as in Spaine" although "coole Breeses asswage the vehemency of the heat."[9] Winters, on the other hand, were frequently as cold as those on the Continent, and the Bay was often clogged with ice. There are numerous recorded instances of colonial ships being stranded and sometimes damaged, or of trade being completely halted, in a frozen Chesapeake Bay. Forever complicating the weather were the extremely variable winds, which often caused sudden drops in temperature. "It is no uncommon thing," wrote the Reverend Andrew Burnaby in 1798, "for the thermometer to fall many degrees in a very few hours; and after a warm day, to have such a severe cold, as to freeze over a river a mile broad in one night's time."[10]

Colonial mariners were often beset by squalls and storms in the Chesapeake.

Captain Smith, on his first voyage of discovery in 1608, experienced such "thunder, lightning and raine, that our mast and saile blew overboard," and Calvert's expedition against Kent Island in the winter of 1637-1638 was severely obstructed by the harsh weather. George Washington once sailed through alternating calms and squalls from Rock Hall on the eastern shore to Annapolis, and the journey lasted fourteen hours instead of the usual four.[11] In August of 1667, a "Hurry Cane" destroyed most of the year's farm crops, and severe storms which damaged many vessels on the Bay were recorded in 1667, 1688, 1749, 1761 and 1769.

Freshets caused by heavy spring rainfalls and melting snows were not uncommon. The worst flood in Chesapeake Bay history occurred in 1771, when "Impetuous Torrents rushed from the mountains with such astonishing Rapidity that nothing could withstand their mighty force,"[12] and there was damage to the extent of £2,000,000 sterling.

Except for the one or two months of summer humidity and the occasional storms, however, the Chesapeake climate was favorable and mild, making it "a faire Bay, compassed but at the mouth with fruitfull and delightsome land."[13] According to Captain Henry Fleet——

> This . . . without all question, is the most pleasant and healthful place in all this country, and most convenient for habitation, the air temperate in summer and not violent in winter. It aboundeth with all manner of fish. The Indians, in one night commonly, will catch thirty sturgeons in a place where the river is not above twelve fathom broad. And as for deer, buffaloes, bears, turkeys, the woods do swarm with them, and the soil is exceedingly fertile, but above this place the country is rocky and mountainous like Cannida.[14]

Fleet was not the only early observer to remark upon the fertility of the soil in Chesapeake country. Father White noted that,

> in passing through the very thick woods, at every step we tread on strawberries, vines, sassafras, acorns, and walnuts. The soil is dark and not hard, to the depth of a foot, and overlays a rich, red clay. There are lofty trees everywhere, except where the land has been cultivated by a few persons. Numerous springs furnish a

> supply of water. No animals are seen except deer, beavers and squirrels, which are as large as the hares of Europe. There is an infinite number of birds of various colors, such as eagles, cranes, swans, geese, partridges and ducks.[15]

The abundance of water fowl on the Bay seldom failed to amaze early visitors. Two Dutch travelers to the area thought they had never seen so many ducks in one place before. "The water was so black with them that . . . when they flew up there was a rushing and vibration of the air like a great storm coming through the trees, and even like the rumbling of distant thunder."[16] One colonist swore that he saw a square mile of ducks in flight. Old turkeys weighed as much as fifty pounds, and a sea turtle caught in the Chester River in 1755 tipped the scales at ninety pounds.[17]

Some of the seafood was also of Brobdingnagian proportions. Twelve-foot sturgeon have been reported, as well as yard-long shad, foot-long crabs, and oysters fourteen inches across ("as big as a horse's hoof").

The grandest descriptions, however, were often saved for the multitudes and seemingly endless variety of fish to be found in the Bay. This superabundance was noted as early as 1608 when Captain Smith made his voyages of discovery. "As for want of nets, our barge driving amongst them [the fish]," wrote Smith, "we attempted to catch them with a frying pan, but, we found it a bad instrument to catch fish with."[18] An eighteenth-century visitor to the eastern shore thought the fish so plentiful that "they were obliged in many places to swim slanting on their sides" and that they could have been caught "without the water coming over my shoes."[19]

Waiting to be eaten or exported were large numbers of herring, shad, rockfish, trout, bass, flounders, sturgeon, and sheepshead. Father White added whales, porpoises, mullets, soles, plaice, and mackerel to the catalogue. Another correspondent observed in 1705:

> Those which I know myself I remember by the names of herring, rock, sturgeon, shad, oldwife, sheepshead, black and red drums, trout, taylor, greenfish, sunfish, bass, chub, plaice, flounder, whiting, fatback, maid, wife, small turtle, crab, oyster, mussel, cockle, shrimp, needlefish, bream, carp, pike, jack, mullet, eel, conger eel, perch and catfish . . . Those which I remember to have seen there of the kinds that are not eaten are the whale, porpoise, shark, dogfish, gar, stingray, thornback, sawfish, toadfish, frogfish, land crabs, fiddlers, and periwinkle.[20]

Stingrays and jellyfish were nuisance creatures which peppered the Bay. Though whales were not common, a Virginia man applied for a whaling license as early as 1710; in 1747 thirty barrels of oil were made by John Custis from a whale which had washed ashore; in 1791 Virginia produced 1,263 gallons of whale oil.[21]

The Chesapeake Bay is known principally for its variety and delectability of shellfish. Every cove and channel abounds with crabs, clams and oysters. Today strict regulations control the taking of shellfish and extensive efforts are being made for their conservation, but no such problems existed for the colonists. It has been said that the only thing which saved the first settlers at Jamestown from total starvation was a plentiful supply of oysters. The first recorded oyster roast in the New World seems to have taken place in Virginia on April 27, 1607, when an exploring party came across an Indian feast at which they found the oysters to be "large and delicious."[22] Although at first the bivalves seemed to be more popular a delicacy among the Indians than with the colonists, by the end of the eighteenth century oyster merchants had gained in respectability and prosperity in Maryland and Virginia.[23] By 1954, Maryland alone was taking in 20,000,000 pounds of oysters a year, wortn some nine million dollars.

The colonists' efforts at conservation centered mainly around the prevention of soil erosion and the clearing from rivers of logs, trees, silt and ballust. Poplar, Tilghman and Sharp's Islands have nevertheless steadily lost acreage to the forces of erosion. Holland Island started to lose ground to the Bay in the early part of this century; by 1920 most families there had been forced to move, and now only one house remains.[24] Under legislation enacted in 1964, Maryland now offers up to fifty percent funding for the construction of shore erosion control structures, as well as technical advice and assistance to property owners.

A number of state agencies have been established for purposes of conserving the Bay's natural resources. Among them are the Board of Natural Resources (created in 1941), the Department of Chesapeake Bay Affairs (1964, superseding the Department of Tidewater Fisheries), the Department of Game and Inland Fish (1939), and the Department of Water Resources (1964).[25]

Fishing and oystering techniques remain much the same today as in the early 1600's, by which time the Indians had become adept enough at catching the bounty of the Chesapeake to serve as tutors and guides for the "fully civilized" European explorers. It seems that the only sophistications added by the white man have been the intuitive deductions that "it is bad luck to swear while fishing" and that "good fortune is yours if you spit on your bait."

So the Chesapeake men continue to sail the Bay for its peace and serenity and to search it for its natural treasures. In the poem "These Chesapeake Men" by Gilbert Byron—

They seek the imperial shad and the lowly crab,
The oyster, the weakfish, the turtle, the rockfish,
The muskrat, the eel, the terrapin, diamond-backed,
The clam, the blue fish, the wild duck,
In the mating of the kingfisher,
In the sloughing of the soft crab,
In the softness of the water's touch,
In the flight of great blue heron,
In the sculling of the oar,
In the passing schools of fish,
In the belly of the sail,
In the hauling of the seine,
In the taste of oysters raw,
In the soaring fish-hawk's wings,
In the touch of southwest wind,
In the little waves that break,
In the surge against the prow,
In the cliffs of yellow clay,
In the setting of the sun,
In the quest of quiet harbor,
In the Chesapeake.[26]

* Notes *

VIII. RESOURCES OF THE BAY

1. MIDDLETON 30. BREWINGTON 2; BALTIMORE MUNICIPAL JOURNAL, 200th ANNIVERSARY, 1729-1929 at 157 (R. Irwin ed. 1929). Many of the sources used in this and the next two sections, describing natural resources, transportation, boating, shipbuilding and commerce on the Chesapeake Bay, are similarly quoted in MIDDLETON—an excellent treatise on the Bay's mercantile development during the colonial period.
2. 2 A. BROWN, GENESIS OF THE UNITED STATES 583 (1890).
3. G. ALSOP, A CHARACTER OF THE PROVINCE OF MARYLAND, 1666, at 36 (Maryland Historical Society Fund - Publication No. 15, 1880). For an additional early commentary on geographical highlights of the Bay, see BREWINGTON 2.
4. FR. A. WHITE, NARRATIVE OF A VOYAGE TO MARYLAND 31 (Maryland Historical Society Fund - Publication No. 7, 1874).
5. *Id.* at 48 (this is from An Account of the Colony of the Lord Baron of Baltimore, author unknown, published with Father White's work). *See also* 1 SCHARF 203.
6. 1 J. SMITH, TRAVELS AND WORKS OF CAPTAIN JOHN SMITH 344 (E. Arber ed., A.G. Bradley ed. new ed. 1910).
7. *Virginia Council Journals, 1726-1753*, 32 VA. MAG. OF HIST. AND BIOG. 26 (1924).
8. *Letters of Rev. Jonathan Boucher*, 7 MD. HIST. MAG. 8 (1912).
9. 1 SMITH, *supra* note 6.
10. A. BURNABY, TRAVELS THROUGH THE MIDDLE SETTLEMENTS IN NORTH AMERICA IN THE YEARS 1759 and 1760 at 36 (reprinted from the 3rd ed. of 1798, 1904).

11. BREWINGTON 57-58.

12. *Virginia in 1771*, 6 VA. MAG. OF HIST. AND BIOG. 128 (1899). *See generally* MIDDLETON at 42-50.

13. 1 SMITH, *supra* note 6.

14. HENRY FLEET, A BRIEF JOURNAL OF A VOYAGE MADE IN THE BARK VIRGINIA, TO VIRGINIA AND OTHER PARTS OF THE CONTINENT OF AMERICA as quoted in E.D. NEILL, THE FOUNDERS OF MARYLAND 27 (1876).

15. WHITE, *supra* note 4 at 42-43.

16. JASPAR DANKERS AND PETER SLUYTER, JOURNAL OF A VOYAGE TO NEW YORK AND A TOUR IN SEVERAL OF THE AMERICAN COLONIES, IN 1669-1680, at 123 *ff*. (Henry C. Murphy transl. 1867).

17. *See* E.S. Miers, The Drowned River: The Story of Chesapeake Bay 14-15 (1967) and MIDDLETON 52-53.

18. 1 SMITH 178.

19. *Papers Relating to the Administration of Governor Nicholson and to the Founding of William and Mary College*, 9 VA. MAG. OF HIST. AND BIOG. 247 (1901).

One of the more interesting theories as to why the Chesapeake is so well stocked was offered by an unknown colonial writer.

> Now this great abundance of fish arises from the following cause: the wind, which uniformly blows from the Canaries to the north-east, drives the water of the ocean, and, with it, the fish into the Gulf of Mexico; from which, since there is no escape for it either to the east or the south, it is driven with great force towards the north, and carries with it large numbers of fish along the shores of Florida, Virginia, Maryland, and New England. These, flying from the larger fish, take refuge in shallow places, where they are more easily caught by the fishermen.

—found in WHITE, *supra* note 5 at 49.

20. J. WHARTON, THE BOUNTY OF THE CHESAPEAKE 39 (Jamestown Booklet 13, 1957).

21. *Id*. at 42-43.

22. MIDDLETON 56.

23. Even the shells were used for making roads, garden paths and brick mortar. By 1751 the price for shells had reached three shillings a hogshead. See Miers, supra note 17 at 18 and MIDDLETON at 58. See also the transcript of the Conference on Resources of the Chesapeake Bay, published by the Chesapeake Bay Authority (1933).

24. See Address by C.W. Wright, Maryland Historical Society, Chesapeake Bay, "The Mother of Waters" 10-12, March 25, 1919; A.A. BODINE, CHESAPEAKE BAY AND TIDEWATER 15 (1954); and MIDDLETON 86-90.

25. MARYLAND MANUAL, 1967-1968 at 137-52 (1968). See infra pp. 73 ff. under "Peacetime Skirmishes."

26. G. BYRON, THESE CHESAPEAKE MEN 19 (1942).

IX.

TRANSPORTATION, BOATING AND SHIPBUILDING

"A gentle breeze wafts us pleasantly on our course;
the day is splendid, and the interesting and magnificent
objects which continually strike the eyes, infinitely exceed
the utmost powers of description."

The Chesapeake Bay and its tributaries gave the tidewater colonists a means of social and commercial intercourse unique to the American colonies, which thereby made possible the very rapid settlement of both Maryland and Virginia. Forty-eight navigable rivers besides the Bay itself greatly facilitated the exportation and importation of staples and commodities in an age when interconnecting highways were unknown, and cross country travel was difficult at best. Although the figures were not known to the colonists, they were surely aware of the proportions: of the 13,959 square miles in the total area of Maryland, there are some 4,285 square miles of water.

* * *

Sailing from England to America in the seventeenth century was no easy matter. The voyage consumed anywhere from seven to twelve weeks, depending upon which route was taken. The northern passage past Newfoundland was shorter and more convenient, generally taking seven to eight weeks to complete. Before 1650, however, the more frequented route was by way of the southern passage, which traversed the West Indies. The Ark and Dove spent three months on the Atlantic Ocean, stopping for short respites at the islands of Barbados and Saint Kitts. When the two small pinnaces finally reached the Chesapeake they caused no little excitement among the Indians, who wondered "where that tree should grow, out of which so great a canow should be hewn, supposing it all of one piece, as their canows."[1]

Conditions on shipboard were appallingly filthy, and the crowded quarters made disease and death exceedingly common. When transatlantic voyages were made through hot tropical climates, the colonists who sought but the promise of hope and a new home often were joined by large groups of convicts and slaves, many of whom fell victims to "jail fever" and "negro fever." Death at sea usually meant burial at sea, and with little or no ceremony.

Travelers quickly learned that the best time to make the trip was in the fall and spring, after the hot summers or cold and rough winters. Whenever their journey was taken, however, passengers had to put up with poor food and an abundance of rats. Captains waged a constant war against the "worm" which ravaged through every ship. Shipowners often tried to cut their costs by purchasing spoiled provisions: standard fare was old hard biscuit, salted meat, and cheese. Sometimes the rats which plundered through the holds were killed, cooked and eaten. A seventeenth century writer complained of the shipboard cuisine thusly:

> But oh the great bowls of Pease - porridge that appeared in sight every day about the hour of twelve, ingulfed the senses of my Appetite so, with the restringent quality of the Salt Beef, upon the internal Inhabitants of my belly, that a Galenist for some dayes after my arrival, with his Bag - pipes of Physical operations, could hardly make my Puddings dance in any methodical order.[2]

Only those who were wealthy and privileged enough to dine at the captain's table had fresh meat and vegetables.[3]

There were few recreations for early travelers, who spent much of their time doing their own laundry, baking, fishing and butchering (if they had happened to bring along a pig). Excitement was sometimes provided by impromptu skirmishes with pirates or national enemies, when whole bags of mail might be thrown overboard to prevent confidential letters from falling into the wrong hands. The rest of the long hours were spent in fighting boredom and disease. Certainly those colonists on the mainland did not relish the prospect of facing a new wave of the plague. By the eighteenth century, though, conditions had improved significantly, primarily due to increased usage of the northern passage. Even so, Maryland in 1766 passed a quarantine act which required that shipmasters swear under oath that their vessels had arrived relatively free of disease.[4]

Westbound mariners knew their voyage would soon be over when the smell of Virginia pine trees wafted past their nostrils, sometimes from as far as sixty leagues offshore, and when the sea changed color from the deep blue of mid-ocean to the dark green off the eastern coast of America.[5] Land was always a welcome sight.

* * *

Indians, especially the Susquehannoughs, had long used the waterways of Maryland for peaceful inter-tribal communication as well as for hostile warpaths. Their canoes and two-masted pinnaces (called "pungies") were soon adopted by the colonists as the most efficient method of transportation. There were also oar-propelled barges and packet-boats "which not only gave to our people a freedom and facility of intercourse with one another not enjoyed by any other agricultural community on the face of the globe, but shaped their manners and regulated their customs to an extent which it is difficult to exaggerate."[6] Other craft in vogue included shallops, bateaus, canoes, skiffs, wherries, piraguas, flats, longboats, dories, yawls, luggers and dinghies.

The first public utility in the New World was a ferry service started on the Chesapeake Bay in 1638. Maryland supplied a boat to enable its burgesses to commute to Saint Mary's City; in Virginia, a man who had been convicted of fornication was ordered to set up a ferry operation across the Old Plantation Creek or submit to thirty lashes of the whip. The first ferries were log canoes poled or paddled across stream or river. Wagons were carried with their wheels resting in two canoes, and their horses swimming. Then came flats or broad-beamed rowboats. For longer trips, such as those across the Bay itself, sailing vessels were used. Today ferry boats are still operating in Wicomico County in the eighteenth century fashion: a flat boat about forty-five feet long is propelled across stream by one man pulling at a rope stretched from bank to bank.[7]

Some ferry services operated more like taxis and advertised that passengers would be carried to any spot ordered in tidewater Maryland or Virginia. But most of the transports went back and forth from one point to another on the Bay. By the middle of the eighteenth century there were three shuttles running regularly between Annapolis on the Severn, and Kent Island, Rock Hall and Oxford on the eastern shore. A traveler going from Williamsburg to Annapolis was obliged to take no fewer than a dozen ferries. By the end of the colonial period the most important of the Chesapeake ferries was that which sailed from Annapolis to Rock Hall, cutting off some thirty miles of land travel on the trip north to Philadelphia.

For the most part Maryland was successful in establishing a system of free public ferries, supported by county levies, while Virginia had begun to license its many private services as early as 1640. Among the ferries operated free from government regulation, great competition existed which tended to improve service. Nevertheless, complaints were no less common in 1669 than they are some three hundred years later concerning service on other modes of public transportation. It was claimed that the Elk River ferry "hath of Late been kept by Negroes whose Master being for the most part absent [are] very Negligent in Discharging their Duty."[8] Sometimes when only one ferry was operating over a particular river the prospective passenger had to build a fire to attract the attention of the ferryman on the opposite shore with smoke signals. But when it took George Washington fourteen hours to cross from Annapolis to Chestertown in 1791, his problems were caused mainly by the horrendous weather.

Once on board and under fair skies, however, the journey often provided an enjoyable interlude from the common vexations of colonial travel. Wrote William

Eddis in one of his Letters from America: "[A] gentle breeze wafts us pleasantly on course; the day is splendid, and the interesting and magnificent objects which continually strike the eyes, infinitely exceed the utmost powers of description."[9]

Early mariners on the Chesapeake, if they were to avoid damaging their vessels or running aground, had to know well its shoals and shallows. The depths of the Bay vary from numerous sandbars and mud banks near the surface to the 137-foot-deep bed of the Patuxent River. Between 1590 and 1776 there were some two hundred and forty-seven maps drawn of the Bay, the first being DeBry's chart in 1590, which was followed by John Smith's 1608 renditions. In 1659 Lord Baltimore commissioned Augustine Herman to draw a detailed map of tidewater Maryland. Herman took ten years to complete his work, which has been called "one of the greatest pioneer achievements in American cartography."[10] The first large-scale mariner's chart, with comprehensive hydrographic information about depths throughout the Bay, was made in 1735 by Captain Walter Hoxton.[11]

The nineteenth century brought about a change in types of Chesapeake Bay vessels from the old-time ferry boats to transportation by steamboat. Twenty-one years before Robert Fulton exhibited his Clermont, James Rumsey of Middle Neck operated a boat on the Potomac River which was propelled by a stream of water forced from its stern by power from a steam pump.[12] The first steamboat service on the Bay was offered on June 21, 1813 by the "Chesapeake," built by William Flanigan of Baltimore, which sailed from Baltimore to Frenchtown.[13] There was steady expansion of the business until every bay or river port had both passenger and freight steamboat service to Baltimore. Perhaps the most pleasant offering was a ride on the "floating theater," a summer aboard which inspired Edna Ferber to write "Show Boat."

Not until 1952, when the great Chesapeake Bay Bridge was built, did steamboat ferries suffer their demise. The Bridge is four miles long and is one of the largest continuous over-water steel structures in the world. Its use has exceeded estimations to such an extent that several additional spans have been authorized by the Maryland General Assembly.

* * *

Surprisingly enough, in an area so placid and available as the Chesapeake Bay, there are few recorded descriptions of pleasure boating in the colonial period. Pinnaces even smaller than the fifty-ton *Dove* were often seen during the seventeenth century. But the earliest known yacht on the Bay was a small vessel called the *Susanna* (owned by Major Richard Sewale of Maryland) which made its first appearance in 1689.[14] This was one of the few boats of the day to be used exclusively for pleasure cruising; more often it was the commercial schooner made to double as a sporting craft which was taken out for a Sunday sailing. Many colonists, however, maintained small rowboats, canoes and barges that could be used for recreational purposes. Sometime before 1745 the first pilot-boats appeared, and these served as the prototypes for the schooner-yachts which were to become fashionable among people of means.

By 1760 there were organized regattas on the Chesapeake Bay, spectacles whose color and excitement have survived to the present. In the spring and summer of 1774, betting races were held on the Potomac and Rappahannock Rivers:

> The Boats were to Start, to use the Language of Jockeys, immediately after Dinner; A Boat was anchored down the River at a Mile Distance—Captain *Dobby* and Captain *Benson* steer'd the Boats in the Race—Captain *Benson* had 5 Oarsmen; Captain *Dobby* had 6—It was *Ebb-Tide*—The Betts were small—& chiefly given to the Negroes who rowed—Captain Benson won the first Race—Captain Purchace offered to bett ten Dollars that with the same Boat & same Hands, only having Liberty to put a small Weight in the Stern, he would beat Captain *Benson*—He was taken, & came out best only half the Boats Length.[15]

In 1851 the yacht *America*, modeled after the early pilot-boats, captured a heralded race against the best contemporary English craft, thereby spawning the seed for the popular America's Cup races. The first yacht club on the Bay was founded in 1852, the Chesapeake Bay Yacht Club coming later, in 1885.[16]

Recreational boating has experienced phenomenal growth during the twentieth century, and the waters of the Bay have not diminished in popularity. To control the use of pleasure craft and maintain safety standards, the Department of Chesapeake Bay Affairs supervises the operation of the Maryland Marine Police, believed to be one of the largest, best-trained and best-equipped units of its kind in the world.

* * *

The shipbuilding industry had a slow but sure beginning on the Chesapeake. The first colonists to reach the shores of Virginia brought with them various parts of a small barge, which they assembled soon after landing. Raw materials were plentiful in the backwoods of Maryland and Virginia, but it was not until 1610, when some forty professional shipbuilders were summoned from England, that sailing vessels started being produced on a regular basis. By 1624 there were forty ships native to the Chesapeake, the largest being about forty tons. William Claiborne set up a small shipyard on Kent Island to produce medium size pinnaces and shallops for his trading activities. Towards the end of the seventeenth century larger ships of about 150 tons' burden were being built. By this time the Bay colonies had produced more than a hundred substantial sea-going vessels.[17]

Maryland shipbuilding, which was concentrated in Talbot and Kent Counties on the eastern shore, slowed considerably in the early 1700's as a result of the loss of numerous vessels during Queen Anne's War and in trading to the West Indies. At the end of the war in 1713, activity livened and reports of many new launchings appeared in the colonial gazettes. The industry prospered largely because of abundant wood resources close by the Chesapeake; shortages of iron, sailcloth and shipwrights were met with newer and larger importations from London.

A great many English shipwrights migrated to the colonies during the first half of the eighteenth century. At first they settled on convenient navigable tributaries of the Chesapeake, later concentrating in the seaport towns of Annapolis, Chestertown and Norfolk. Many offspring industries now began to flourish. Ship chandleries, iron manufacturers, ropewalks and sail makers did thriving businesses. There were numerous and complete facilities for refitting and repairing damaged vessels. For many years Annapolis was the chief rival to Norfolk in the competition for ships in need of outfitting and repair.

Particularly after King George's War the excess of demand over supply in sailing vessels led to higher production costs, and there was considerable expense (and risk) involved for businessmen in the shipbuilding industry. A two-year collapse in the market between 1766 and 1768 failed to repress rising costs, and more than one shipbuilder went out of business. Nevertheless, in the years before the Revolution, the Chesapeake was a shipbuilding center second only to New England in size and importance.

* * *

After the Revolutionary War, all manner of sailing ships could be seen on the Chesapeake Bay. Besides the familiar sloops, pinnaces and packet boats there were barks, snows, brigs, brigantines and schooners.

When experimentation with new shapes and designs, sizes of sails and number of masts was in vogue at the start of the eighteenth century, classification of the various rigs became difficult. It was easy to identify, however, the famous Baltimore Clipper ship. In the language of the mariner, it was "a trim, rakish craft, with smooth underbody, considerable deadrise, deep drag of keel aft, low freeboard, and a minimum of standing rigging."[18] In short, it was sleek and fast. The Clipper was developed during the Revolutionary War to facilitate smuggling and privateering on and around the Chesapeake Bay.[19] After the war they quickly caught on to the north and the south and soon became famous the world over for their unmatched speed and efficiency.

The Maryland shipbuilding industry itself took on an international character during the nineteenth century. With the advent of the metal hull and increasingly sophisticated designs, construction centers moved from bayside yards to mammoth plants owned and operated by large corporations.[20] Today, the industry on the southern shores of the Bay is limited chiefly to the making of small pleasure craft.

IX. TRANSPORTATION, BOATING AND SHIPBUILDING

1. WILSTACH 38. The journey eastward from the Chesapeake Bay to England normally was accomplished in 6-7 weeks. See generally MIDDLETON 5-8.
2. G. ALSOP, A CHARACTER OF THE PROVINCE OF MARYLAND, 1666, at 90 (Maryland Historical Society Fund - Publication No. 15, 1880).
3. See MIDDLETON at 9-16 and 35-37.
4. B. Sollers, Transported Convict Laborers in Maryland During the Colonial Period, 2 MD. HIST. MAG. 36 (1907).
5. As early as 1720 the Governor of Virginia suggested that a lighthouse be built on Cape Henry at the mouth of the Chesapeake Bay. Nothing was done until 1772, when Virginia and Maryland passed the necessary legislation. Exigencies of the Revolutionary War prevented completion of the lighthouse before 1792. The oldest existing lighthouse on the Bay is the one at Cove Point, built in 1828.
6. 2 SCHARF 2. See also R. SEMMES, CAPTAINS AND MARINERS OF EARLY MARYLAND 57 and 68 (1937).
7. BREWINGTON 57-58 (1956). For a comprehensive and entertaining treatment of colonial ferriage in Maryland and Virginia see generally MIDDLETON at 60-71.
8. C.P. GOULD, MONEY AND TRANSPORTATION IN MARYLAND, 1720-1765, at 135 (1915). See generally MIDDLETON at 265-85.
9. W. EDDIS, LETTERS FROM AMERICA 4 (1792)
10. WILSTACH 108-09, 280 and 290. See generally E.G. Swem, Maps Relating to Virginia, 7 VIRGINIA STATE LIBRARY No. 2 and 3 at 41-71 and 37 (1914). For his efforts Herman was granted five thousand acres of land on the east side of the Elk

River (now Bohemia Manor).

11. W. Hoxton, Mapp of the Bay Chesapeack with the Rivers Potomack, Patapsco, North East, and part of Chester (1735) See generally MIDDLETON 71-77. At MIDDLETON 77-83 there is a discussion of early pilots and pilotage on the Chesapeake Bay.

12. Rumsey died while contesting John Fitch for rights to the steam engine. WILSTACH 110-11.

13. BREWINGTON 43 and WILSTACH 115.

14. W.L. Henderson, Then and Now, Yachting on the Chesapeake, YACHTING No. 3 at 67. The earliest use of the term "yacht" was applied in 1676 to one of Lord Baltimore's armed ships, the Loyal Charles.

15. P.B. FITHIAN, JOURNAL AND LETTERS OF PHILIP VICKERS FITHIAN, 1773-1774, at 202-03 (Hunter D. Farish ed. 1943).

16. See generally BREWINGTON 27-42, 63-110 and 221; R.H. BURGESS, CHESAPEAKE CIRCLE 1965; R.H. BURGESS, THIS WAS CHESAPEAKE BAY (1963); MIDDLETON 225-30; SEMMES, supra note 6 at 73; and Henderson, supra note 14 at 66.

17. BREWINGTON 9-10. See generally MIDDLETON 230-43.

18. MIDDLETON 219. See also 2 SCHARF 605.

19. Some believe that the clipper-type craft first appeared as early as 1670 in the port at St. Michaels. See 2 SCHARF 63.

20. BREWINGTON 10-12.

53.[illegible]

X.

COMMERCE AND TRADE

"Tis the Blessing of this Country . . . and fits it extremely for the Trade it carries on, that the Planters can deliver their Commodities at their own Back doors, as the whole Colony is interflow'd by the most navigable Rivers in the World."

The Chesapeake Bay and its many tributaries had perhaps their greatest influence on the historical development of Maryland and Virginia by providing the natural waterways which made possible the large-scale production and merchandising of tobacco. Had there been no Bay, the tobacco-producing colonies undoubtedly would have lagged in the growth of their population and prosperity.

In the first half of the seventeenth century, mercantile interests on the Bay centered primarily around the fur-trading activities of the early frontiersmen. Most prominent among these were Captain John Smith, Captain Henry Fleet, and William Claiborne. It was not until the colonists' fondness for rum and sugar began to stimulate trade with the West Indies that the Chesapeake asserted its international significance. Barbados and Bermuda were willing customers for American meat and fish. And the abundance of oak and soft yellow pine on Chesapeake shores and in its backwoods spurred the growth of the shipbuilding industry.

One curious phenomenon which resulted from the Bay's extraordinary accessibility to sea-borne traffic was the negative effect it had upon the growth of townships. This in turn repressed the development of social and cultural institutions. William Eddis pointed out in one of his *Letters from America*:

> . . . Maryland will never abound with port. . . . By the advantage of so many navigable waters, an opportunity is afforded to ship the produce of many extensive districts, even at the doors of the respective planters; who, consequently, have not that inducement, common to most countries, for establishing themselves in populous communities.[1]

The principal river towns of tidewater Maryland which flourished during the half-century before the Revolution were Port Tobacco, Piscataway, Bladensburg, Londontown, Joppa, Charlestown, and St. Mary's City. These communities became centers for the sale of imported goods as well as departure points for the exported commodities of tobacco, corn, wheat, lumber and iron. Along the fall line there were established such towns as Upper Marlboro on the Patuxent, Georgetown and Alexandria on the Potomac, Fredericksburg and Falmouth on the Rappahannock, Richmond on the James, and Petersburg on the Appomattox. Each of these was important in supplying goods to the hinterlands westward. Annapolis and Williamsburg, seats of the colonial governments in Maryland and Virginia, fostered brisk businesses among shopkeepers and tavernkeepers, craftsmen, merchants, shipbuilders and chandlers. Until it was surpassed by Baltimore in the 1770's, Norfolk, Virginia, was the Chesapeake's leading port and commercial center.[2]

Baltimore itself was a fall line town which saw its development nourished by both the Chesapeake trade to the east and the agricultural boom to the west. In December of 1730 surveyors laid out the first plans of what was to become one of the largest cities in the nation. At the time of its birth, the present Baltimore was the third community in the province to bear the name of Maryland's Lord Proprietary, and was situated between the already existing townships of Joppa and Elk Ridge Landing. The port area of the city was far from being a great natural harbor. As early as the Revolutionary War, artificial construction devices were being used to improve the harbor, with crude machines brought in to dredge and enlarge it.[3]

Already mentioned have been the rapid development of the seafood and shipbuilding industries. But by far the most important staple in the colonial economy was tobacco. And although the delicate nature of the plant precluded overland transportation of the thousands of half-ton hogsheads, the Chesapeake waterways were quickly recognized as ideal for the purpose. An eighteenth-century writer observed:

> ['T]is the Blessing of this Country . . . and fits it extremely for the Trade it carries on, that the Planters can deliver their Commodities at their own Back doors, as the whole Colony is interflow'd by the most navigable Rivers in the World.[4]

It was a Virginian named John Rolfe who first discovered (in 1612) that tobacco would grow well in the Chesapeake country and sell profitably in England. Despite objections which ranged from King James' opinion that the weed was "loathsome to the eye, hateful to the nose, harmful to the brain," and "dangerous to the lungs," to the Virginia Company's insistence that the colony produce a variety of commodities, tobacco quickly caught on as the staple of economy. Many of the early settlers at Jamestown and St. Mary's City were planters who owned small clearings called "oronookos," in which tobacco was extensively cultivated. By 1619 it was the only commodity being exported to England. Production jumped from 60,000 pounds in 1622 to 500,000 pounds in 1628 to 1,500,00 pounds in 1639. By the time of the Revolution, the export total was 100,000,000 pounds of finished leaf, worth some $4,000,000.[5]

The business of manufacturing and marketing tobacco was not without its risks. Planters faced the substantial possibilities that poor weather would ruin their crops, or that they would lose their product in shipwrecks or to pirates or privateers. There were also depressions resulting from overproduction or wartime restrictions on exports. If a sufficient number of hogsheads survived the rolling and stormy seas between the Chesapeake and the British Isles, there was the additional peril that shifts in the weather would cause spoilage of the product. Despite all of the attendant risks, however, the tobacco trade proved an invaluable source of revenue for both the royal treasury and the colonial governments. Taxes and duties imposed on exports and imports made the tobacco colonies "of as great importance to his Majesty as the Spanish Indies to Spain."[6]

So much tobacco was exported by the Maryland and Virginia colonies that by 1660 the English market had become glutted. Various attempts were made to reduce the amount of tobacco manufactured, to regulate the size of hogsheads and prohibit shipments in bulk, and to prevent the exportation of "trash tobacco." But the situation remained serious. Lord Culpeper, the Governor of Virginia, declared that "Our thriving is our undoing."[7] The potential economic disaster never materialized, but only because of the gradual though certain establishment of a tobacco market on the European Continent. By the end of the seventeenth century, some two-thirds of the crop annually produced on the shores of the Chesapeake was being imported by Holland, France, Spain, and a few years later by the Baltic countries and Russia.[8]

* * *

One of the most attractive features of colonial trade for the English was that, with the exception of sailing vessels, Maryland and Virginia produced almost nothing which might compete substantially with British manufacturing interests. On the other hand, the Chesapeake colonies consumed large amounts of British cloth, china, hardware, building materials, and other goods. It was not until the beginning of the eighteenth century that serious efforts were made by the colonies at agricultural diversification. Later on, industries for tanning hides and producing iron and cloth began to give body to the American economy. The fur trade which was so important to early Chesapeake entrepreneurs remained relatively small throughout the colonial period.

In addition to their rapidly growing exchange of consumer products, England and her colonies maintained a vigorous trade in slaves during the eighteenth century. Negroes were bought on the African coast for as little as ₤4 to ₤6 apiece. Between 1700 and 1750, their going rate in the Chesapeake colonies increased from ₤16 to ₤40 apiece. At first colonial merchants were deterred from entering the highly profitable trade, for want of investment capital, and most of the slave-trading business was monopolized by the large and influential Royal African Company operating out of England. Gradually, however, as the American economy grew and prospered, American capital found its way into the British companies.

There were substantial risks in the trade of slaves which tempered some of the enthusiastic financial prospects. Shippers sailing from Africa to the Chesapeake had to contend with debilitating heat, rampant disease and a great many pirates. Negroes were packed into ships' holds with little concern for their health or survival: sanitation, ventilation and food ran the short gamut from poor to non-existent. It was not uncommon for a slaving transport to lose one-quarter of its human cargo enroute.[9]

Despite the high mortality rate, the slave population around the Chesapeake multiplied tremendously during the eighteenth century. In 1700 there were approximately 6,000 slaves in Virginia and 4,000 in Maryland. By 1790 the two states numbered between them some 400,000 negroes and the rate of increase alarmed even the early eighteenth century governments. In 1710 Governor Alexander Spotswood of Virginia claimed that "the Country is already ruined by the great number of negros imported of late years."[10] After that year both Maryland and Virginia began to impose higher duties on imported slaves, in an attempt to reduce the heavy traffic (while at the same time raising needed revenues). This legislation upset the British interests, to the point where the Privy Council introduced its own regulations over the trade. Depending on the relative economic and political postures on both sides of the Atlantic, duties applicable to slave imports fluctuated throughout the century.

Besides the slave trade, large numbers of immigrants seeking homes in the New World and felons released at the convenience of the British Government, provided both English and American shipowners with ample revenues from transportation. But as with other mercantile ventures across the Atlantic, the many problems of overseas trade made free enterprise as much a challenge as a profitable activity.

All told, however, British imports of goods and commodities from the Chesapeake Bay during the seventeenth and eighteenth centuries accounted for more than half of the total imports from the combined American colonies.

* * *

Trade between the Chesapeake provinces and other American settlements was founded primarily on the exportation of grain, foodstuffs and lumber rather than of tobacco. Maryland and Virginia sent large quantities of corn, wheat and flour to New England. In return, the New England colonies supplied European-made clothes and domestic foodstuffs, including codfish, mackerel, cheeses, raisins, apples and cranberries. Also imported from the north were various beverages and whaling products, woodenware, furniture and simple tools. It is interesting to note that the New England colonies used many of their Chesapeake imports for third-party trade with Great Britain and the West Indies, while Maryland and Virginia consumed most of their New England products domestically.

The Middle Atlantic provinces also maintained active trading relationships with the West Indies, to and from which the short voyage had its definite advantages over the lengthy trip to England, and with the Wine Islands (Madeira, Cape Verde, and the Azores), Spain, Portugal and Italy. Grain, lumber and salted fish were exported from the Chesapeake Bay, in return for wine, rum, sugar, salt, cotton, molasses, citrus fruits and bills of exchange.[11]

* * *

The development of a domestic merchant marine fleet in the Chesapeake was a slow and costly process. As with other economic ventures between England and her colonies, most of the capital outlay was made by the established British businessmen. Few ships were owned by colonists before the end of the seventeenth century, although several Virginians and Marylanders held shares in British shipping companies.

In 1633 there were some thirty to forty vessels trading to Virginia. By 1667 the number had increased to between eighty and a hundred, with approximately one-third dealing with Maryland. The tobacco export boom inflated the number of trading ships from around 150 vessels carrying 75,000 hogsheads of tobacco in 1700, to twice that number and amount in 1706. Subsequently, there was a gradual decline in tobacco shipping, as new regulations on its exportation were enacted throughout the rest of the colonial period.

Another interesting comparison between the Chesapeake colonies and their New England counterparts may be seen in the amounts of British mercantile investment in shipping to the two areas. In 1743 the value of British shipping in Maryland and Virginia was estimated at ₤330,000 and employment was had by 3,360 mariners; in New England the value was about ₤24,000 and 240 sailors were employed.[12]

As early as 1661 both Maryland and Virginia passed various acts to encourage the growth of a native American merchant marine. Progress was slow and unsteady. Most of the colonially owned vessels traded with the West Indies, far closer to the Chesapeake than the British Isles. But losses were heavy, especially during times of war, because the Chesapeake-West Indian routes seldom carried protective convoys. Depressions and revivals in the number of colonial vessels occurred during and after the Anglo-French Wars and King George's War. By the middle of the eighteenth century the Maryland merchant marine had sixty ships manned by 480 sailors.

The Chesapeake's early dependence upon Great Britain for the safe conduct and delivery of its exports and imports gradually relaxed over the century-and-a-half following the first settlement of the Maryland and Virginia colonies. Increasing colonial ownership and economic prosperity, combined with continuing restrictions imposed by the mother country, were several of the factors which created a climate of, and spurred the quest for, independence in America.

* * *

After the Revolutionary War, the commercial development of the Chesapeake Bay made rapid advances. For the first time, however, the political separation of Maryland and Virginia presented clear-cut difficulties in the regulation of trade to, from and between the now sovereign states. Virginia found itself unable to establish an efficient system of duties which did not conflict with those of Maryland. In 1777, Congress had recommended that Maryland, Virginia and North Carolina settle their differences through joint arbitration, but for various reasons the discussions never materialized. The following year, Maryland and Virginia appointed commissioners for the express purpose of deciding upon the rights of each state to the use of and jurisdiction over the Chesapeake Bay, but again the convention failed to reach any agreement satisfactory to both sides. Finally, in 1785, commissioners from the two states formally settled upon a compact.

In principle, Virginia agreed to relinquish her right to charge tolls for Maryland vessels entering the Chesapeake Bay through the Virginia Capes; Maryland gave Virginia the rights of use, navigation and jurisdiction of the Bay and the Potomac and Pocomoke Rivers; and fishing rights in the Potomac were made common to citizens of both states. The first two provisions were rendered ineffective with the adoption in 1787 of the Commerce Clause of the Federal Constitution, but the agreement over equal fishing rights retained its legal validity.[13] The various disputes subsequently arising out of the Compact of 1785 will be treated in the discussion of boundary disputes, _infra_.[14]

X. COMMERCE AND TRADE

1. W. EDDIS, LETTERS FROM AMERICA 90 (1792).

2. MIDDLETON 40-42. *See also* BREWINGTON 115-18 and WILSTACH 44.

3. One early merchant to take advantage of the improved port facilities was John Stevenson, who recognized the potential for profit in the exportation of wheat and flour to his native Ireland. BREWINGTON 113.

4. *Observations in Several Voyages and Travels in America*, 15 WILLIAM AND MARY QUARTERLY 147 (Series I 1907). *See also* 2 SCHARF 3.

5. M. JACOBSTEIN, THE TOBACCO INDUSTRY IN THE UNITED STATES 23, 28 (1907). *See generally* MIDDLETON at 93-95, 110-20, and 239.

   A book entitled SHAW'S FORTUNE by E. TUNIS tells the story of a plantation near the head of Manokin Bay, a small Chesapeake inlet. The tale is charming, the text straightforward, the illustrations well-rendered (and the book recommended).

6. Sir John Knight to the Earl of Shaftesbury, 1673, CALENDAR OF STATE PAPERS, COLONIAL SERIES, AMERICA AND WEST INDIES, 1669-1674, No. 1159 at 530.

7. Lord Culpeper to Lords of Trade and Plantations, CALENDAR OF STATE PAPERS, COLONIAL SERIES, AMERICA AND WEST INDIES, 1681-1685, No. 319 at 156.

8. One reason which has been suggested for the inability of Maryland and Virginia to control the volume or standardize the quality of their tobacco production until the eighteenth century was the political separatism of the two colonies. It has been argued that the essential unity of the Chesapeake Bay region, both geographically and economically, makes its division particularly impracticable; had Charles I recognized this it would have been to the mutual benefit

of Great Britain and her colonies. MIDDLETON 355-58. Other results of the division, asserts Middleton, were disputes over fisheries and navigation in the Potomac, a lack of coordination and cooperation in the defense of the Bay during wartime, and the failure to make uniform customs laws and regulations concerning pilots and ferries.

9. *The Journal of Francis Louis Michel*, 24 VA. MAG. OF HIST. AND BIOG. 117 (trans. and ed. by W.J. Hinke 1916).

10. Lt. Governor Spotswood to the Council of Trade and Plantations, CALENDAR OF STATE PAPERS, COLONIAL SERIES, AMERICAN AND WEST INDIES, 1710-1711, No. 710 at 415-16.

11. *See* MIDDLETON at 133-77.

12. The figures for Jamaica were ₤120,000 value and 1,200 mariners; for Barbados, ₤96,000 value and 960 mariners. *See generally* MIDDLETON at 244-64.

13. C.N. EVERSTINE, THE COMPACT OF 1785 at 27 (1946). *See also* 2 SCHARF 530 *ff*.

14. *See infra* pp. 70-73 and accompanying footnotes. For additional material in the Chesapeake Bay see BREWINGTON 137-41.

XI.

THE BAY IN WARTIME

"On the shore, dimly seen thro' the mist of the deep,
Where the foe's haughty host in dread silence reposes . . .
'Tis the star-spangled banner. Oh! long may it wave
O'er the land of the free and the home of the brave!"

The broad reaches of the Chesapeake Bay and the extensiveness of its tributary system have made both Maryland and Virginia, from their earliest histories, particularly vulnerable to naval attack. Whether the enemy was Spanish, Dutch, French, English, pirate or privateer, the colonial governments had to defend the vast area of the Bay itself besides the many rivers feeding into it.

In addition, the tobacco colonies had to depend upon Great Britain for the protection of their merchant marine vessels during the transportation of commercial items to and from the Chesapeake. In the seventeenth and eighteenth centuries it was not unusual for a fleet of one hundred and fifty to two hundred ships to cross the Atlantic together, with the annual export of goods and commodities from Maryland and Virginia, two of Great Britian's most productive colonies. Such large convoys, often accompanied by warships, were the primary means of defense against enemies of all sorts, in war and in peace.[1]

The New England, Carolina and Georgia colonies could secure themselves against direct attack with strategically placed forts at the mouths of rivers and at the entrances to harbors. But the opening to the Chesapeake Bay was so wide, and the settlers of Maryland and Virginia were so widely scattered, that forts were of little use (except on islands and small rivers) and the threat of enemy depredations was ever present. The Chesapeake colonies quickly reached the conclusion that their only true means of protection rested in a naval force.[2]

The first recorded naval engagement in the New World took place in 1635 between pinnaces owned by William Claiborne of Virginia and Leonard Calvert, Governor of Maryland. But it was some years later before a foreign country was to violate Chesapeake waters. In 1667 Virginia petitioned the Crown's Privy Council for a frigate to defend her shores against the Dutch. England responded by sending over the Elizabeth, but the gesture proved too little, and too late. Five Dutch warships easily took the Elizabeth and controlled the Bay for almost a week before leaving of their own accord. Five years later, in the third Dutch War in 1672-1673, two men-of-war lent to the colonies by England were captured.

During the next decade and a half, the Bay was the scene of numerous skirmishes. Bacon's Rebellion in 1676 witnessed the meeting of the opposing forces' small navies. In 1681 pirates unsuccessfully attempted to seize the Lord Proprietor of Maryland together with the Provincial Magazine. And in 1685, despite the presence of a royal warship on the Bay, the pirate Roger Makeele roamed, seized and plundered at will.[3]

The colonies continued to make repeated requests for naval protection from England, especially during King William's War in the 1690's and Queen Anne's Wars after 1701. Even between these conflicts pirates and privateers had regular field days on and around the Bay. Later on, in 1708-1709, French privateers increased their depredations against the east coast of North America, and frequent rumors of impending attacks kept Virginia and Maryland in continuous and apprehensive vigil.

From 1713 to 1720, Spanish ships regularly took prized from the Chesapeake Bay's commercial fleet, despite the Peace of Utrecht in 1713. The 1720's saw a marked increase in acts of piracy: it was the heyday of the pirates Louis Guittar, John Vidal, Roberts and Blackbeard. After 1727, piracy diminished but privateering was more commonplace than ever, particularly between 1745 and 1748 when dozens of Chesapeake ships fell prey, and even plantations on the eastern shore were plundered.

"Privateers" (from "private" and "volunteer") were originally authorized by governments, through "letters of marque and reprisal," to recover from other ships a sum equal to the amount taken or owed by the enemy. Later on the commissions were issued to any vessel willing to interfere with enemy shipping. While pirates were universally condemned, privateering was legal—and condoned, if not encouraged, by most governments.

The first privateering on the Chesapeake was by Claiborne and Calvert in the dispute over Kent Island. Far more prominent from an historical perspective, however, were the subsequent privateering activities on behalf of Maryland and Virginia, which gave the two colonies some measure of an offensive naval force. Nevertheless, during the colonial period, "at no time did the Chesapeake receive what might be called sufficient naval protection. This rich seat of commerce was . . . one of the weakest spots in the armor of the British Empire."[4]

Privateering tended to be discouraged by the Chesapeake colonies during the first half of the eighteenth century. But after 1740, increased capital enabled the Bay's privateers to roam widely in pursuit of enemy vessels, and their importance continued through both the Revolutionary War and the War of 1812. Many judicial decisions during the seventeenth and eighteenth centuries involved the disposition of prizes taken on the Bay as well as those captured on the high seas. There was little consistency from one case to the next, until Parliament in 1708 enacted a law which regulated the taking and awarding of prizes.

* * *

Almost without exception, every war in which Great Britain was involved after the seventeenth century had reverberations within the Chesapeake Bay. After the Declaration of Independence in 1776, no fewer than five of the original thirteen states were located on or very close to the Bay.

It was not until the Revolutionary War that England had its first direct confrontation with the American colonies. As colonial trade began to offer stiff competition to England, Parliament in 1774 passed a series of "Navigation Acts," which were quickly labeled by many Americans as the "Intolerable Acts." These were the last straws in what the colonists viewed as a systematic program of commercial intimidation which England had begun with the Stamp Act of 1765.

Maryland's opposition to the increasing mercantile restrictions was as strong as in any of the colonies. On October 19, 1774, one year after the Boston Tea Party, the brig Peggy Stewart and her cargo of 2,300 pounds of tea were burned in the harbor at Annapolis. The fire was lit by the brig's owner himself, Anthony Stewart, after he announced his contrition:

> . . . we solemnly declare, for the future, that we never will infringe any resolution formed by the people, for the salvation of their rights; nor will we do any act that may be injurious to the liberties of the people; and to shew our desire of living in unity with the friends of America, we request this meeting, or as many as may choose to attend, to be present at any place where the people shall appoint, and we will there commit to the flames, or otherwise destroy, as the people may choose, the detestable article, which has been the cause of this our misconduct.[5]

On July 10, 1775, the ship Totness from Liverpool, England, ran aground on a Chesapeake shoal near the Three Sisters Islands off the West River. Eight days later members of the colonists' nonimportation association ordered the crew off and set fire to the vessel and its cargo. This was the "second burnt offering to liberty" within the province.[6]

The first formal American navy began outfitting in Baltimore in October of 1775. This was to mark the temporary change of Maryland's largest city from a growing industrial community to a military planning center, and of the Chesapeake Bay from a brisk mercantile arena to a theater of marine warfare. Baltimore, however, was to remain the only major city on the Atlantic seaboard never held by a foreign enemy. During the Revolutionary War its privateers controlled coastal commerce from New England to the West Indies, traded with Bristol and London while smuggling from Holland and France, and ranged as far as the Spanish Coast and the Pacific Ocean in conducting naval guerilla warfare against the British.

While defensive preparations were being made in Baltimore, the mouth of the Chesapeake Bay was being blockaded by the British. Governor Dunmore continued his depredations along the Virginia coast, and in the Bay an increasing number of enemy cruisers harassed the American merchant marine. Then, on March 5, 1776, the British sloop-of-war Otter sailed up the Chesapeake and anchored outside of Annapolis in an overt act of intimidation. The colonists did not react passively. In the spring of 1776, the American ship Defense was launched and quickly succeeded in capturing numerous enemy vessels. After the Declaration of Independence on July 4, Maryland's small navy went on to acquit itself well throughout the Revolution.[7]

Congress, meeting in Baltimore in early 1777, received word that the British were planning to attack certain Maryland coastal settlements on the Chesapeake Bay. All military provisions were ordered removed from the eastern shore, the lower counties of which were still occupied by numerous Tories. By August the British fleet had sailed up to the head of the Bay and several ships had been dispatched up the Elk River to seize American stores. ("Head of Elk" became the scene of shifting troops and supplies throughout the war.) By September the British were in the Patapsco——and Baltimore was ready to give the enemy "a warm reception," according to the Maryland Gazette——but the confrontation never took place. Throughout 1778, British ships preyed upon mercantile vessels on the Bay and in 1779 renewed their attacks as part of the campaign which began in the south with the capture of Savannah, Georgia. Plundering and looting of property along the Bay as far north as the Patuxent continued through 1780.

Lord Cornwallis, incensed at the British defeat in the Battle of Cowpens in 1781, determined to march north in pursuit of the American army and to meet his troops in the Chesapeake Bay. The British planned to take a position near the Susquehanna. On April 10th, Sir Henry Clinton wrote to one of his fellow officers that "the security of the Carolinas is of the greatest moment, but the best consequences may be expected from an operation up the Chesapeake." Lord Cornwallis in turn wrote Clinton the same day, saying "I cannot help expressing my wishes that the Chesapeake may become the seat of war, even, if necessary, at the expense of abandoning New York."[8]

George Washington prepared to move his army in August, together with the French allies under Count Rochambeau and Count de Grasse, to meet Cornwallis on and around the Chesapeake.[9] There was great activity among the merchants of Baltimore and officers of the Army in establishing supply routes and provisioning prospective encampments on the shores of the Bay. The spirit was there, if the equipment was not. Governor Thomas Sim Lee wrote to General Washington on August 30th:

> You may rely, Sir, on every exertion that is possible for us to make, to accelerate the movements of the army on an expedition, the success of which must hasten the establishment of the Independence of America . . . Orders have been issued to impress every vessel belonging to the State, and forwarding them without delay to the head of Elk. But we are sorry to inform your Excellency that since the enemy has had possession of the Bay, our number of sea vessels and craft has been so reduced by captures, that we are apprehensive what remains will not transport so considerable a detachment.[10]

Washington was appreciative of the efforts made. Upon his arrival in Baltimore, he thanked the citizenry at length.

Count Rochambeau encamped his French troops at the site of the old Havre deGrace race track, just before moving on to Yorktown near the southern tip of the Bay. On September 7th, he was joined by the fleet of Count deGrasse. Together they went against the British, inflicted heavy losses, and decisively won the Chesapeake for America. A few days later Cornwallis surrendered his troops, and the war was over.[11]

* * *

In the years immediately following the Revolution, the Chesapeake Bay continued its prominent position in the affairs of the nation, particularly after Congress recommended the City of Annapolis for the capitol of the United States.[12]

At the end of the eighteenth century a renewed source of friction between Great Britain and America was fast coming to a head. Over a long period of time, beginning as early as 1690, there were many desertions from British naval and merchant marine vessels by sailors seeking higher wages and the better working and living conditions in America. Before the Revolution, the British had replaced deserters by impressing colonial seamen into the Royal Navy. This was done with the ready cooperation of the colonial governments. After Independence, however, such practices were no longer possible. The situation became only more acute as England's increased involvement with Napolean dictated her concurrent need for a navy at full strength.

In 1805 James Madison reported to Congress that some 2,273 Americans had been impressed into the Royal Navy during the past year. On the other hand, it was rumored that as many as twenty thousand British sailors were working in the American merchant marine. The backbreaking straw came on June 22, 1807, when the British cruiser Leopard attacked the American frigate Chesapeake just outside the three-mile territorial limit, over an impressment dispute.[13]

Added to this provocation were the "paper blockades" of American ports set up by Britain and France (at war with one another). The United States was caught in the middle. Finally, on June 18, 1812, America declared war on Great Britain. One of the first places to which the British dispatched troops was the Chesapeake

Bay. British captains had long been familiar with the Bay's military advantages, and both Baltimore (the privateering center) and Washington (the nation's capitol) were situated near the Chesapeake. And since the states which bordered on the Bay seemed to be divided as to the desirability of another war with Great Britain, the area seemed a good place to begin a campaign of terror and attrition. So on December 26, 1812, Britain formally declared a blockade of the Delaware and Chesapeake Bays. The British fleet under Rear Admiral George Cockburn entered the Chesapeake on February 4, 1813, anchoring at Hampton Roads, Virginia.

Four days later the Baltimore schooner _Lottery_ tried to run the British blockade. After brisk fighting, in which the _Lottery's_ Captain John Southcomb was mortally wounded, she was taken as a prize. On March 16th, four other Chesapeake schooners were captured. The British fleet sailed up the Bay in early April, plundered the exposed settlements, and established a base on Tangier Island. During that month the British occupied Spesutie, Poplar and Tilghman's Islands, seized Frenchtown, and threatened both Annapolis and Baltimore. In May, Havre deGrace, Georgetown and Fredericktown were burned. Norfolk held its ground in June, but the town of Hampton, Virginia succumbed to British invaders. In late July and early August the enemy fleet again gave signs of threatening Annapolis and Baltimore, but settled for the time being as a base on Kent Island. There were also three British ships moored within three miles of Washington, D.C. In the meantime, two attempts to capture St. Michael's Island were repulsed. The British fleet spent the winter of 1813-1814 in Bermuda.[14]

In defense of the Chesapeake Bay was Commodore Joshua Barney's flotilla of twenty-six vessels and nine hundred seamen. These were little match in numbers to the British naval forces but during late May and June of 1814 Barney was successful in conducting a type of hit-and-run warfare on the sea. Then, on July 1st, he was called to defend Washington. By early August the British had reinforced their Chesapeake fleet and on August 22nd Upper Marlboro was taken. The

American flotilla was ordered to destroy itself. Two days later the British won the Battle of Bladensburg and burned the public buildings of the nation's capitol. Now the plan was to attack the "hornet's nest" of Baltimore, "which had equipped and sent to sea on President Madison's request more privateers than any other city in America."[15]

While Washington was burning, a Committee of Vigilance and Safety formed in Baltimore. Placed in charge of the military defenses was General Sam Smith, 62 years old and a veteran of the Revolutionary War. It was known that the British planned to attack the city by both land and sea, and the Americans were prepared. On the waterfront, Baltimore was protected by Fort McHenry, with one thousand men under the leadership of Major George Armistead, and by two smaller fortifications at Fort Covington and Fort Babcock. To protect against attacks by land, defenses were also established at North Point and, directly on the city line, in what is now Patterson Park.

On September 11, 1814 the British fleet anchored in the mouth of the Patapsco, and were immediately reconnoitered by a force of Maryland militia under General John Stricker. A day later the British landed at North Point and were driven back, their commander, General Robert Ross, being killed in the fighting. The frustrated invaders, facing what seemed to be the entire American army on the outskirts of Baltimore, never attacked.

At dawn on September 13th, the bombardment of Fort McHenry began. American cannons returned the enemy fire but their shells fell far short of the British vessels. A nighttime attempt to capture the Fort from the rear was abortive. Major Armistead revealed the strength and spirit of his troops in a report of the action he filed with the Secretary of War.

> During the bombardment, which lasted twenty-five hours (with two slight intermissions), from the best calculations I can make, from fifteen to eighteen hundred shells were thrown by the enemy. A few of these fell short. A large

> proportion burst over us, throwing their fragments among us and threatening destruction. Many passed over and about four hundred fell within the works. Two public buildings were materially injured, others but slightly. I am happy to inform you (wonderful as it may appear) that our loss amounts to only four men killed and twenty-four wounded. The latter will all recover.[16]

Francis Scott Key, the lawyer-poet from Washington, D.C., had sailed from Baltimore with John Skinner, an American agent for prisoner exchange, to meet the British fleet and negotiate the release of an elderly Maryland physician named Beanes. Key and Skinner convinced the British that they should free Dr. Beanes in return for the humane treatment accorded British prisoners of war, but all three Americans were forced to remain with the enemy fleet during its bombardment of Fort McHenry. Key was so inspired by the tattered star-spangled banner which continued to wave by the dawn's early light, that he wrote the poem which has become our national anthem.[17]

The war ended two months later.

* * *

The War of 1812 was the last large-scale conflict to make the Chesapeake Bay a strategic battle area, although subsequent American wars related in one way or another to tidewater Maryland.

In 1861 the federal government kept a strong garrison at Fort McHenry, had troops stationed in Annapolis, and held control over the mouth, headwaters and tributaries of the Chesapeake. The Confederates did manage to capture the steamer St. Nicholas at Point Lookout, although the exploit was managed more by deception than by force. The only other notable event on the Bay during the War Between the States was the famous clash of the ironclads, the South's Virginia and the North's Monitor, at Hampton Roads.

For the most part, however, the Civil War as it related to the Chesapeake was limited to minor skirmishes involving corellary forces, and to a great deal of illicit trading by which the Confederate army supplied itself with various goods and commodities.[18] The Bay remained essentially a military highway for the North.

During the Spanish-American War the United States Navy's "Flying Squadron" sailed out of the Bay to hunt the enemy on the high seas. (In command of the Squadron was Winfield Scott Schley, born on the banks of the Monocacy River.) In the first World War ammunition and soldiers were shipped out of Norfolk, and during both World Wars Liberty ships transported military supplies from the Bay. Various amphibious naval craft were tested on Chesapeake shores and simulated beachheads in the 1940's, and four German ships taken as prizes on the high seas were anchored in the Bay.[19]

Except for various civil disputes upon its waters, however, the Chesapeake Bay during the twentieth century has remained briskly commercial and peacefully serene.

* Notes *

XI. THE BAY IN WARTIME

1. See generally MIDDLETON, Chapter Ten, and at 319-20.

2. L.H. WILLIAMS, PIRATES OF COLONIAL VIRGINIA 5 (1937).

3. BREWINGTON 197-98.

4. MIDDLETON 335 and, generally, id. Chapters Eleven and Twelve.

5. From statement signed by Anthony Stewart, Joseph Williams and James Williams, quoted in 2 SCHARF 160.

6. W. EDDIS, LETTERS FROM AMERICA 218 (1792). Shortly thereafter, Virginia's Governor Dunmore (who was loyal to the Crown) attached plantations owned by Maryland patriots on the southern shores of the Bay. See 2 SCHARF 186-87.

7. From April, 1777 through March, 1783, some 248 privateers from Maryland rendered heavy damage to British naval operations in the Chesapeake. 2 SCHARF 203-05, 210-12. See also B.W. BOND, STATE GOVERNMENT IN MARYLAND 82. On December 2, 1777, John Paul Jones from Hampton's Corners sailed into the Port of Brest, France——a Chesapeake ship preying on the British in their own territory. L. Webb-Peploe, The Chesapeake Bay and Its Tributaries 8-9 (1923 monograph).

8 2 SCHARF 441.

9. Washington had already sent Marquis de Lafayette to dislodge the traitor Benedict Arnold from the James River area. Lafayetter was assisted by Commodore James Nicholson and Major James McHenry, both born on the Bay.

10. 2 SCHARF 456.

11. See E.S. Miers, The Drowned River: The Story of the Chesapeake Bay 23-24, 28 (1967); 2 SCHARF 458-62. The last of the Bay Country's "tide mills"

stands on a branch of Mobjack Bay. Records indicate that it supplied ground grain for Washington's army during the seige of Yorktown. A.A. BODINE, CHESAPEAKE BAY AND TIDEWATER 29 (1954).

12. A portion of the sales pitch made by the Annapolis city fathers:

> . . . The city standing within three miles of the Bay of Chesapeake, and on a large navigable river, with a high, dry soil, and many springs of excellent water, is remarkably healthy . . . The Bay of Chesapeake and rivers falling into it, will afford safe and capacious harbors for fleets of ships of any size and force, and dispatches may be conveyed or received with great facility to or from Europe, or any other part of the world.
>
> —quoted in 2 SCHARF at 494-95.

13. When the British opened fire, Captain James Barron discovered that his men lacked matches, gunlocks, powder horns and wadding for the charges. Before surrendering he managed to fire a single shot, set off by a red-hot coal carried in the fingers of a young lieutenant. Three Americans were killed and eighteen wounded. This was to be the only peacetime attack upon an American naval vessel in history, before the intelligence ship *Pueblo* was taken off the coast of North Korea in early 1968. 66 LIFE No. 5 at 20 (February 7, 1969). *See also* G. BYRON, THE WAR OF 1812 ON THE CHESAPEAKE BAY 7-11 (1964).

14. BYRON, *supra* note 13 at 17-32. *See also* WILSTACH 151 and 230-31, and 3 SCHARF 127.

15. E.S. DELAPLAINE, MARYLAND IN LAW AND HISTORY 81 (1964). A roving Methodist preacher from Deal Island, named Joshua Thomas, delivered a sermon to the British on Tangier Island in 1814 to the effect that they could not take Baltimore and that they would not succeed in their expedition. *See* WILSTACH 168.

16. Quoted by G. BYRON, THE WAR OF 1812 ON THE CHESAPEAKE BAY 72 (1960) and 3 SCHARF 121-22.

17. The second stanza of "The Star Spangled Banner" is quoted in part at the beginning of this section. *See generally* DELAPLAINE, *supra* note 15 at 79, 3 SCHARF 117-20, and WILSTACH 209-11.

18. *See generally* 3 SCHARF 522 and H.N. CHRISTIAN, LIFE AND LIVING IN THE CHESAPEAKE BAY REGION 5 (1959). For some post-Civil War nostalgia, see R. BARRIE and G. BARRIE, JR., CRUISES: MAINLY IN THE BAY OF THE CHESAPEAKE (1909).

19. *See* BODINE, *supra* note 11 at 13 and 20, and CHRISTIAN, *supra* note 18.

XII.

PEACETIME SKIRMISHES

"The Lord, and not the State of Maryland, put the oysters there."

Boundary disputes between Maryland and Virginia have taken place almost from their colonial beginnings in the early part of the seventeenth century. The charters awarded by the Crown to Lord Culpeper (of the London Company) and to Lord Baltimore (for the Maryland province) were basically contradictory. George Calvert's original grant encompassed a great deal more territory than that which is presently Maryland, and included area in what are now Delaware and Pennsylvania. Some historians have asserted that, by virtue of invalid claims by Pennsylvania, Delaware and Virginia, some four and one-quarter million acres of the true charter of Maryland were wrongfully appropriated by her neighbors.

In 1634-1635 Lord Baltimore published his "Relation of Maryland," which purported to describe the rightful boundaries of his palatinate.[1] Philip Calvert and Edmund Scarborough were appointed in 1661 to effect a settlement of the southern boundary. Seven years later a line was agreed upon, between landmark trees on the Pocomoke River and on the shore of Chincoteague Bay near Franklin City. But despite this early understanding, the controversy over the eastern shore's point of departure for the boundary line, and over the sovereignty of the Potomac River, was to remain unsettled for more than two centuries.[2]

By the 1700's both Maryland and Virginia were still claiming rights to the Potomac and Pocomoke Rivers. Virginia had also taken up the practice of collecting tolls from all vessels entering the Chesapeake Bay through Cape Charles and Cape Henry, even if they were bound for ports in Maryland. When Virginia ratified its first constitution in June of 1776, various old claims to territory in Pennsylvania, Maryland and the Carolinas were relinquished——but the right to the free use and navigation of the Potomac and Pocomoke Rivers was expressly reserved. Maryland, of course, refused to acquiesce to that reservation.[3]

As noted earlier, several conferences between the two states in the late 1770's, which had been designed to harmonize commercial interests in the Bay and its tributaries, had failed to produce agreement. In June of 1784 Virginia urged renewed negotiations to settle the difficulties, and Maryland consented. The fact that Maryland was still especially disturbed by Virginia's tolling practices is made clear in one of the instructions to its commissioners:

> You are to insist that the Commonwealth of Virginia shall expressly relinquish every claim to impose tolls on any vessels whatever sailing through the Capes of Chesapeake Bay to the State of Maryland or returning from this State through the said Capes, outward bound; this you are to insist upon as a condition sine qua non, and if not acquiesced in by the commissioners from the commonwealth of Virginia, you are to break up the conference . . .[4]

Commissioners from both governments met in late March of 1785, and a compact agreeable to both was drawn before the month ended.[5]

On the whole, the main considerations for the Compact were commercial in nature, Virginia relinquishing her right to tolls in return for rights of navigation in and jurisdiction over the Potomac and Pocomoke Rivers and the Chesapeake Bay. (Fishing rights in the Potomac were made common to both states.) But the agreement did offer two contributions towards settlement of the long-standing boundary dispute: Article Ten mentioned Smith's Point and Watkins' Point as references for a line across the Chesapeake Bay separating Maryland from Virginia; and Article Seven gave to the citizens of each state "full property in the shores of the Potomac adjoining their lands," thereby setting the Potomac boundary line at the low water mark on the Virginia shore.[6]

Since Maryland and Virginia were but loosely joined under the Articles of Confederation (1785), and since both states considered themselves sovereign, the Compact from the beginning had less legal force than moral commitment. Moreover, with the adoption of the Commerce Clause in the Federal Constitution (1787), the prior commercial agreements became largely superceded.

Most of the nineteenth and twentieth century judicial and legislative history relating to the Compact of 1785 was concerned with commercial and fishing rights, especially along the Potomac River. Several cases, however, dealt with boundaries and jurisdiction. An 1829 decision refused to enjoin the construction of a dam across the Potomac, holding that the Compact referred only to the tidewater portions of the River.[7] Two later cases pointed out that the provisions in Article Ten for a citizen of either state to be tried in the courts of his own state were contingent upon the boundary line being uncertain; but these provisions were rendered ineffective with the drawing of a boundary which was acceptable to both Maryland and Virginia.[8]

That agreement did not come until 1877. Twenty-five years earlier the two states had appointed commissioners to retrace and mark a proper boundary line between Smith's Point and the Atlantic Ocean, but negotiations were discontinued with the outbreak of the Civil War. In 1872 and 1873 numerous meetings between the commissioners resulted in a decision to submit the question to binding outside arbitration.[9] On January 16, 1877, the arbitrators issued their report. The Potomac River was placed within the jurisdiction of Maryland, the southern boundary of the state to be at the low water mark on the Virginia side (as measured from one headland to another, without reference to indentations, creeks or rivers.)[10]

Thus ended the longest-standing controversy between the sister states on the Chesapeake. It had lasted nearly two hundred and fifty years.

But contentions were renewed during the twentieth century, and culminated in 1957 with Maryland's complete repeal of the Compact of 1785. The repealing legislation reads in part:

> Whereas, the citizens and law enforcement personnel of the State of Virginia have callously and intentionally disregarded, disobeyed and interfered with the enforcement of laws regulating the acquisition, preservation and conservation of natural resources in the Potomac River, and
>
> Whereas, the State of Maryland has requested the State of Virginia to cooperate in the preservation of these natural resources of the Potomac River which the State of Virginia has effectively refused to do, all of which is to the mutual detriment of the citizens of both States, and
>
> Whereas, the State of Virginia has clearly demonstrated its unwillingness and open refusal to cooperate in the enforcement of existing laws and to adopt new laws for the effective enforcement of the preservation and conservation of these valuable natural resources, and
>
> Whereas, the State of Virginia has clearly demonstrated its intention to disregard and flout the rights of the State of Maryland as owner of the bed of the Potomac River and to interfere with the lawful rights of the State of Maryland and its citizens . . .
>
> [Now, therefore, the Compact of 1785 is repealed.][11]

* * *

Closely related to the boundary disputes were various cold and warm wars that involved the taking of fish and oysters from the Bay. In the early years the colonists saw little need to conserve the Chesapeake's bountiful supply of seafood. But by the start of the nineteenth century, the Maryland and Virginia Assemblies were beginning to express concern over the indiscriminate depletion of some choice oyster beds.

Virginia first passed an act regulating the manner in which oysters were to be taken from its waters in 1810, and in 1818 restricted the exportation of oysters from the Commonwealth (except where they were taken from the Potomac and

Pocomoke Rivers, which were held in common with Maryland).[12] In 1820, Maryland made it unlawful to take or export oysters by persons who had not resided in the state for at least twelve months.[13] Various statutes which further regulated oyster dredging were passed by both states during the 1830's.[14]

Most of the early oyster legislation was conspicuously lacking in effective enforcement, and the regulations were widely and openly flaunted. In 1865 the Maryland Assembly passed a law requiring oyster dredgers to be licensed, but local sheriffs found this as difficult to enforce as the other oyster laws. Finally, in 1868, a State Oyster Police Force was established and outfitted with a steamer and several fast sloops and schooners. The boats were equipped with small arms, and their captains with a substantial number of statutes to enforce.

The task was very often a frustrating one. According to an 1887 issue of Goode's Fishery Industries of the United States, there were simply too many oystermen and too few policemen:

> It is now rarely the case that a dredger can be found who will admit that he believes there is anything wrong in disregarding the oyster laws and such a thing as being disgraced among his fellow workmen by imprisonment for violation of the laws is totally unknown. In the above facts will be found sufficient reasons why it has been impossible for the oyster police, since its first organization, to enforce the laws. Seven hundred well-manned, fast sailing boats, scattered over such a large area as the Chesapeake Bay, are rather difficult to watch, and especially at night.[15]

During the last two decades of the nineteenth century there were numerous pitched battles between oyster tongers and dredgers (dredging was forbidden in many parts of the Bay), and among dredgers, oyster pirates, and the police. All of the watermen seemed to share a concerted disliking for the patrol boats. After the Award of 1877, when Maryland was forced to yield some 23,000 acres of the best oyster bottoms to Virginia, Smith Islanders continued to dredge in defiance of both states. One notable skirmish occurred in the Choptank River in 1888, when the greatly outnumbered patrol boats succeeded in breaking up an illegal operation by ramming the line of defense which had been set up by the allied oystermen.

Politics have always played a large part in the cold wars over oysters. Both good and bad oystermen held votes in the Maryland and Virginia Assemblies, and the infighting was more often stalemated than not. Laws relating to fishing rights in the Potomac and Pocomoke Rivers as well as in the Bay itself were passed throughout the nineteenth century, and various agencies to study, regulate and control Maryland and Virginia fisheries have been established in the twentieth.[16] But the famous Chesapeake Bay oyster remains the item around which most of the controversies have arisen. During the twentieth century, even though oysters are scarcer and dredge-boats fewer, there seem to be just as many scofflaws as ever. The Maryland Marine Police have tried to keep pace by adding to their forces faster and more sophisticated equipment, including aircraft. Nevertheless, conservationists point out that "the problem is likely to remain unsolved so long as healthy oysters continue to grow in Chesapeake waters and the philosophy of some watermen remains unchanged."[17]

Just as important as the political and legal aspects of the oyster wars are the emotional and historical factors. An 1894 issue of Harper's Weekly noted that:

> The Chesapeake Bay, with its thousands of square miles of surface, and its hundreds of miles of tributaries, has more than 600,000 acres of oyster bottom which have for years supported nearly 50,000 people. The supply was so magnificent that exhaustion was thought to be impossible. And so when the State found it necessary to pass and enforce certain regulations, the bolder of the fishermen looked upon the action as an interference with the laws of Providence which was not to be tolerated. To many of them the taking of oysters where the State said they should be let alone was not a crime and they were ready to fight for what they believed to be their rights. This resulted in serious differences of opinion which were emphasized by powder and shot, and embittered by bloodshed.[18]

Although a good deal of live ammunition was expended during the skirmishes, it was seldom used accurately, and enough lead was wasted "to supply sinkers for all the fishing lines along the Atlantic Coast. In the 30 years of oyster wars only about 50 men have been killed, and the wounded would not reach 50 more."[19] Those totals were increased substantially in the following year (1895), when a battle in Woman's Marsh between rival oystermen produced many casualties. Not until 1910, when several more choice beds became overworked and unproductive, was there some letup in the skirmishing. Nevertheless, piracy and disease were to cause continued depletion of the Bay's oyster crop during the first half of the twentieth century.[20]

From the point of view of those who make and enforce the laws, the oystermen are an obstinate and immoral lot. To the watermen, "The Lord, and not the State of Maryland, put the oysters there."[21] Conservation officials and oystermen continue to regard one another with a salty mixture of pathos and contempt. Gilbert Byron's poem, "The Duel," poses a fanciful though perhaps typical confrontation:

Waterman—

No thanks, Mister, I don't beg,
Or bend my leg,
Just for a handout.
I've sailed the bay
Nigh twenty year,
In calm, in storm,
In bloody fear,
I'll steal what the Good Lord
Planted here,
You see,
I'm free.

Conservation Official (departing)—

Poor fool.

Waterman (to himself)—

Damn fool.[22]

* Notes *

XII. PEACETIME SKIRMISHES

1. 1 SCHARF 235, 259.

2. 1 SCHARF 262, and E.B. MATHEWS and W.A. NELSON, REPORT ON THE LOCATION OF THE BOUNDARY LINE ALONG THE POTOMAC RIVER BETWEEN VIRGINIA AND MARYLAND 2-3 (1928). Scharf claims that, even under the 1668 agreement, Maryland lost some 15,000 acres it had rightfully held under the original charter.

3. Maryland's rejection of the Virginia claim was overruled by the Supreme Court in Maryland v. West Virginia, 217 U.S. 577 (1910), which held that, by the Compact of 1785, Maryland had assented to Virginia's rights ("citizens of each state shall have full property on the shores of the Potomac and adjoining their lands"). For a complete history of events leading to the Compact of 1785 and of cases construing it afterwards, see Barnes v. State, 186 Md. 287, 47 A.2d 50 at 53-62 (1946) and infra footnote 7.

4. Quoted by C.N. EVERSTINE, MARYLAND IN LAW AND HISTORY 1 (1964) and 2 SCHARF 529.

5. See EVERSTINE, supra note 4 at 1-2 and 2 SCHARF 530. Maryland was represented at the meeting, held at Mount Vernon, by Daniel St. Thomas Jenifer, Thomas Stone and Samuel Chase. Virginia sent George Mason and Alexander Henderson. The Compact provided substantially as follows:

> I. Virginia disclaimed all right to impose any toll, duty or charge, prohibition or restraint, on any vessel sailing through the capes of Chesapeake Bay trading to or from Maryland; that the waters of the Chesapeake Bay and the river Pocomoke within the limits of Virginia be for ever considered common highway, free for the use of vessels owned in Maryland, or carrying on commerce with the State or its

citizens; that all such vessels should enter the waters of Virginia without the payment of port duties or any other charge, and that the vessels of Maryland should have free navigation in any part of the State.

II. The State of Maryland confers the same privileges on vessels trading to or from Virginia.

III. Vessels of war, the property of either State, to be free of all charges.

IV. Vessels not exceeding forty feet keel, nor fifty tons burthen, owned in either State, with a permit from the naval officer from which they depart, might trade in either State, free of charge; provided they only have on board the produce of the said States.

V. All merchant vessels (except those described in the IV Article), navigating the Potomac were to clear at some naval officer on the river in one or both States; and if entered in both States, were subject to tonnage in each State in proportion to the merchandise carried to or from the said State.

VI. The Potomac to be a common highway to citizens of the United States and those in amity with the same States, trading to or from Virginia to Maryland.

VII. The citizens of Maryland and Virginia, respectively, to have full property in the shores of the Potomac, adjoining their lands, with all emoluments etc., with the privilege of running out wharves or any other improvement, so as not to obstruct the navigation; but the right of fishing was to be common to and equally enjoyed by the citizens of both States; provided they did not interfere with the fisheries, seines or nets on the shores of the other.

VIII. All laws for the preservation of fish, navigation, quarantine, etc., to be made with the consent of both States.

IX. Light-houses, beacons, buoys, signals, etc., to be erected and maintained upon Chesapeake Bay, between the sea and the mouths of the rivers Potomac and Pocomoke, at the expense of both States; also those on the Potomac. Virginia to pay three-fifths, and Maryland the remainder.

X. For the trial of persons charged with piracy.

> XI. For the libelling of vessels for debt; absconding criminals, debtors, etc.
>
> XII. Persons owning lands in one State and residing in the other, had liberty to transport to their own State the produce of such lands, etc., free of duty.
>
> XIII. These articles to be laid before the Legislature of each State for its adoption, upon which they were to be confirmed and ratified by a law of each State, and were never to be repealed or altered by either, without the consent of the other.
>
> —2 SCHARF 531.

The original text of the Compact is found in 1 MAXCY, THE LAWS OF MARYLAND, 1692-1807 at 536.

6. *See* EVERSTINE, *supra* note 4 at 29-34.

7. Binney's Case, 2 Bland 95 (Md. 1829). *See* EVERSTINE, *supra* note 4 at 6-7. For other cases construing the Compact, see Negro Delilah *et al*. v. Jacobs, 4 Cranch CC Reports 238 (1832); Georgetown v. Alexandria Canal Company, 37 U.S. (12 Pet.) 91 (1838); State v. Hoofman, 9 Md. 28 (1856); Hendricks v. Virginia, 75 Va. 934 (1882); Potomac Steamboat Co. v. Upper Potomac Co., 109 U.S. 672 (1884); Biscoe v. Maryland, 68 Md. 294, 12 A. 25 (1888); *ex parte* Marsh *et al*., 57 Fed. 719 (1893); Wharton v. Wise, 153 U.S. 155 (1894); Morris v. United States, 174 U.S. 196 (1899); Marine Railway Company v. United States, 257 U.S. 47 (1921); Herald v. United States, 284 Fed. 927 (1922); Middleknuff v. LeCompte, 149 Md. 621, 132 A. 48 (1926); Washington Airport v. Smoot Sand Co., 44 F.2d 342 (1930); and Barnes v. State, 186 Md. 287, 47 A.2d 50 (1946).

   Legislative enactments relating to Chesapeake and Potomac fisheries are discussed *infra* at pp. 73-75.

8. *Ex parte* Marsh *et al*., 57 Fed. 719 (1893) and Barnes v. State, 186 Md. 287, 47 A.2d 50 (1946). *See* EVERSTINE, *supra* note 4 at 15-16.

9. By agreement neither state could by decision of the arbitrators deprive the other of rights and privileges enumerated in the Compact of 1785. MD. LAWS ch. 247 (1874); and VA. ACTS ch. 135 (1874). The arbitrators chosen were Jeremiah S. Black (United States Attorney General, Secretary of State); William Alexander Graham (United States Senator, Secretary of the Navy); Charles Jones Jenkins (Governor of Georgia). Graham, then Governor of Georgia, was replaced upon his death by James B. Beck (United States Senator from Kentucky). *See* Mathews and Nelson, *supra* note 2 at 4-11; and 1 SCHARF 262-65.

10. Award of 1877; ratified by Congress on March 3, 1879, 20 Stat. 481. For the current Potomac River Statutes, see MD. ANN. CODE art. 66C, § 261A (1957); MD. ANN. CODE art. 66C, § 704 (1957); MD. ANN. CODE art. 43, § 407 (1957); VA. CODE ANN. § 7.1-7 (1950); VA. CODE ANN. § 28.1-203 (1950); VA. CODE ANN. §§ 28.1-204 to 226 (1950); and VA. CODE ANN. §§ 62.1-64 to 69 (1950).

11. MD. LAWS ch. 766 (1957).

12. VA. ACTS ch. 17 (1810); and VA. ACTS ch. 32 (1818).

13. MD. LAWS ch. 24 (1820). Virginia passed the same qualification in VA. ACTS ch. 40 (1820).

14. MD. LAWS ch. 87 (1829); MD. LAWS ch. 249 (1831); MD. LAWS ch. 265 (1832), and MD. LAWS ch. 254 (1832); VA. ACTS ch. 192 (1831); and VA. ACTS ch. 84 (1832).

The basic version of the present concurrent laws on taking oysters from the Potomac River, which recognized rights under the Compact of 1785, was enacted by both states in 1884. MD. LAWS ch. 76 (1884); and VA. ACTS ch. 405 (1884). MD. LAWS ch. 766 (1957).

15. *See generally* R.H. BURGESS, THIS WAS CHESAPEAKE BAY 136-39 (1963); and J.W. Carman, *The Origin and History of the Maryland Marine Police*, 42 MARYLAND CONSERVATIONIST 12-16 (July-August 1965).

16. *See* MD. LAWS Resolution 44 (1816); MD. LAWS ch. 279 (1831); MD. LAWS ch. 134 (1832); MD. ANN. CODE art. 41, §§ 12-21. The Commission of Fisheries was created in 1874 to study and report on all state fish resources. *See also* VA. ACTS ch. 80 (1831); VA. ACTS ch. 90 (1842); VA. ACTS ch. 71 (1843); and VA. ACTS ch. 280 (1860).

17. BURGESS, *supra* note 14 at 139.

18. 38 HARPERS WEEKLY 95 (1894).

19. *Id*.

20. *See* H. FOOTNER, RIVERS OF THE EASTERN SHORE 90-91 (1944). The vertical files of the Maryland Room at the Enoch Pratt Free Library in Baltimore contain a voluminous body of material concerning the Chesapeake Bay's oyster industry. *See* especially under "Oyster Culture—Laws and Regulations." Articles of particular interest may be found in the Evening Sun (Baltimore), March 7, 1939, *Oyster Decline Marked by Riots and Gun Fights*; Sunday Star (Washington), December 14, 1947, *Chesapeake Oyster Patrol Takes to the Air*; and the Sunday Sun Magazine (Baltimore), February 2, 1969.

21. From G. BYRON, *The Lord's Oysters*, THESE CHESAPEAKE MEN 114-17 (1942).

22. From G. BYRON, *The Duel*, THESE CHESAPEAKE MEN 137-38 (1942). Both poems (cited in footnotes 21 and 22) are recommended.

XIII.

CONCLUSION

The long and varied history of the Chesapeake Bay serves to emphasize its continued importance in the economy and sociology of Maryland and Virginia. From the earliest explorations to the present day, the Chesapeake has remained a commercial center for the world and an historical treasury for the nation. The past is filled with battles fought, freedoms won and prosperity gained upon Chesapeake Bay waters. Hopefully its future will be as significant and colorful.

PART TWO:

THE LEGAL FRAMEWORK

I.

THE PUBLIC DOMAIN

A. The Feudal Heritage

The feudal land system which developed in England following the Norman Conquest in 1066 is the progenitor of the various legal institutions which today make resource allocation decisions. F.W. Maitland has described feudalism as "a state of society in which all or a great part of public rights and duties are inextricably interwoven with the tenure of land, in which the whole governmental system—financial, military, judicial—is part of the law of private property."[1] Feudalism proceeded from the nominal premise that at some time in the past all lands were the King's to do with as he pleased, and that except to the extent he had granted rights in the lands to feudal lords, they remained his property. This premise was applied not only to the fast land of England, but to submerged lands and tidewaters as well.

The notion that at one time all the land was subject to the King's pleasure is, of course, historically inaccurate.[2] The feudal system can be viewed as merely a way of describing the informal treaty reached by the King and the great barons concerning how the primary resources of England were to be divided. The basic requirement was that the barons make payments or afford services to the King, apportioned according to land holdings; the barons were then left to their own devices to exact a return from their land holdings. In this frame of reference, the King's ownership of all the land is but a reflection of his right to payments or services.

The informal treaty between the King and the great barons was by no means static. Disputes continually arose as to the respective prerogatives of the

King and the barons. Several such disputes involved the use of tidewaters and tidelands. King Richard I and perhaps some of his predecessors made grants of private fisheries. The holders of these grants constructed fish traps which interfered with shipping. Since the economy of London was heavily dependent on river traffic, londoners had a substantial interest in the removal of the traps. The problem became so acute that in 1197 Londoners paid King Richard 1500 marks for permission to destroy the obstruction and an additional sum was paid to King John in 1199.[3] The Kings of this era also asserted their prerogative to use river banks for hunting and fishing and, in so doing, the royal court destroyed hedges and trampled crops.[4]

In 1215 these disputes along with many others led to the signing of the Magna Carta, by which rebellious barons exacted a series of formal concessions from a recalcitrant King John. Clause 33 provided for the removal of fish traps from the " . . . Thames, and the Medway, and through all England excepting on the seacoast."[5] Clauses 47 and 48 rejected King John's claim to "Water-banks" as royal hunting reserves and provided that all "evil customs" relating to waterbanks should be destroyed.[6]

Following the Magna Carta, the respective prerogatives of King and barons continued to be readjusted. The evolving Parliament passed a series of laws designed to prevent the inclosing of navigable rivers and to conserve the supply of fish.[7] For example, a statute during the reign of Edward IV confirmed previous enactments prohibiting the construction of fish nets in order to protect navigation and the "fry of fish."[8] Although these regulations did not place any direct limitations on the King's prerogatives, several commentators have urged that they had the effect of taking away the King's power to grant exclusive tidewater fishing rights to particular individuals.[9] Hence, in the early seventeenth century, when the Crown began to claim the New World by virtue of discovery, the King was still said to own tidewaters and land submerged thereunder, but the exercise of his ownership was hedged by various parliamentary enactments which protected navigation and the supply of fish.

B. The Chain of Title

Both Virginia and Maryland were initially creatures of the Crown. In 1606, Virginia was granted by James I to a group of "adventurers," who later formed the London Company; a supplemental grant was given which designated that company as grantee. The charter of the London Company was forfeited in 1624 and Virginia became a Crown Colony, managed by a series of colonial governors. In 1688 Virginia was in effect partitioned, when James II granted the so-called Northern Neck (approximately six million acres north of the Rappahannock River) to Thomas Culpeper.[10] Maryland's colonial origins are less complicated. In 1632 Charles I granted Maryland to Cecilius Calvert; at the time America became independent, this charter was still held by Calvert's successors.

These grants worked an allocation of Chesapeake Bay tidewater. In the Virginia Colony proper, rights remained in the Crown. The charters to Culpeper and Calvert transferred rights to the lords proprietor. Culpeper's grant (which subsequently passed to Lord Fairfax and is generally called the "Fairfax Grant") included "said rivers themselves and all the islands within the outermost banks thereof."[11] The grant to Calvert included "all and singular ports, harbors, bays, rivers and straights, belonging to the region or islands aforesaid."[12]

Following the American Revolution and the adoption of the United States Constitution, the American common law system was faced with deciding who had acquired the tidewater property previously held by the Crown and lords proprietor. The United States Supreme Court responded to this challenge in Martin v. Lessee of Waddell. Chief Justice Taney determined that—

> . . . when the Revolution took place, the people of each State became themselves sovereign: and in that character hold the absolute right to all their navigable waters and the soils under them for their own common use, subject only to the rights since surrendered by the Constitution to the general government.[13]

C. The Public Domain in the Federal System

Other judicial decisions place flesh upon Taney's skeleton. The people's sovereign power over submerged lands is exercisable by state legislative bodies.[14] The submerged public domain in Maryland extends to the mean high tide mark on each bank while in Virginia it extends to the mean low tide mark.[15] The states surrendered to the United States Government the paramount power to regulate commerce.[16] States admitted to the Union after adoption of the United States Constitution came in on an "equal footing" with the original thirteen states as to the ownership of submerged land.[17]

Over one hundred years after Judge Taney's decision, the advent of new technology prompted a limitation on his ruling. With the discovery of oil on the Continental Shelf off the California shore and the development of means to reclaim it, questions of the various rights involved were brought into play. Mr. Justice Black, speaking for the U.S. Supreme Court, affirmed that lands submerged under navigable waters were the property of the state, but he limited this principal to inland navigable waters. It was held that the United States, and not California, had paramount rights in the three mile marginal belt along California's coast, including full dominion in the oil under that water area.[18] Subsequent litigation has applied the same principal to lands off the shore of Louisiana and Texas, disregarding differences in their history prior to admission to the Union, and has decided that the paramount rights of the federal government in the marginal sea begin at the low water mark on the shore.[19] In the wake of these decisions, however, Congress ceded back to the states all lands and natural resources within three miles of the coast.[20]

D. Boundaries

In establishing the respective interests of Virginia, Maryland and the United States in the tidewater public domain, attention must also be focused upon the boundaries of the three jurisdictions. Part of the Chesapeake Bay estuarine system, the Potomac River, serves as a boundary between Maryland and Virginia. Which state owns its waters and submerged lands?

The original grant to Lord Baltimore made the "farther bank" of the Potomac the southwest boundary of Maryland. The grant of the Northern Neck of Virginia made by King James II to Lord Culpeper was bounded by the Potomac River on the north and seemed to include the river bed (i.e., "together with the said rivers themselves, and all islands within the outermost banks thereof"). Despite this ostensible conflict, Maryland's claims to the bed of the Potomac River have never been seriously controverted; rather, the disputes have been concerned with whether the Maryland boundary was at the high or low water marks and whether the boundary followed all the nooks and crannies of the shoreline.[21]

After debating these matters for over two hundred years, the states finally agreed to accept what has come to be known as the Arbitration Award of 1877. This award placed the Maryland boundary at the low water mark of the southern bank of the Potomac and provided that:

> The low-water mark on the Potomac, to which Virginia has a right in the soil is to be measured . . . from low-water mark at one headland to low-water mark at another, without following indentations, bays, creeks, inlets or affluent rivers.[22]

Since distinct headlands are hard to establish in a broad tidal estuary, boundary disputes continued to arise. But in 1927, the state geologists of the two states collaborated in drawing a definite boundary line and the state legislatures adopted their interpretation of the Award of 1877.[23]

The United States Government also acquired an interest to a portion of the Potomac River when Maryland ceded it the District of Columbia. The Supreme Court has held that the federal government's proprietary interest extends to the submerged land appurtenant to the district.[24]

E. Navigability

In defining the tidewater public domain it is also necessary to determine which waters are navigable. Both Virginia and Maryland have adopted the common law rule of construction that private owners of land abutting non-navigable streams own the bed to the thread or center thereof.[25] Hence, the question of whether submerged lands are publicly or privately owned often turns upon the question of whether the waters are navigable.

Virginia and Maryland have evolved disparate definitions of navigability. Virginia courts have said that a stream is navigable only if it "is used or susceptible of being used in its natural and ordinary condition 'as a highway for commerce on which trade and travel are or may be conducted in the customary modes of trade and travel on water'."[26] In Maryland the courts initially adopted the rule that waters are navigable if the tide ebbs and flows.[27] However, for the last thirty years the Court of Appeals has been conducting a serious flirtation with the "navigability in fact" test——that is, waters are navigable if in their natural state they can be traversed by boats.[28] In its most recent pronouncement the court avoided choosing between the two tests by determining that, by either definition, the strip of disputed land lay under navigable waters.[29]

F. Organic Materials

The Chesapeake Bay serves as an ecological base for a wide variety of fish, shellfish and other organisms. The law has allocated rights to this biotic potential among Virginia and Maryland in the same way that it has allocated the rights to submerged lands. For example, the United States Supreme Court has said: "The States own the tidewaters themselves, and the fish in them, so far as they are capable of ownership while swimming."[30] In a rough sense, then, the States of Virginia and Maryland may be said to own the biotic potential of the Bay found within their territorial waters.

Historically, the states' proprietary claim to fish and shellfish has had a significant consequence. Both the Maryland and Virginia legislatures have passed laws restricting fishing and shellfishing privileges to their respective citizens.[31] The validity of these laws has been called into question under Article 4, Section 2 of the United States Constitution which provides that "The Citizens of each State shall be entitled to all Privileges and Immunities of Citizens in the several States." In McCready v. Virginia, decided in 1877, the Supreme Court upheld the validity of a Virginia statute which made it a crime for a non-citizen to "plant or take oysters" from Virginia waters.[32] The court found the statute to be constitutional by reasoning that the right of Virginia citizens to acquire oysters was not a result of citizenship alone, but was also an exercise by the state of its right to dispose of its property, just as it might dispose of corn grown on a state-owned farm.

Toomer v. Witsell,[33] a 1948 Supreme Court case, has cast serious doubts on the continued application of the McCready rule. In Toomer, the State of South Carolina attempted to levy a shrimp fishing license fee on non-residents one hundred times as great as the fee that residents had to pay. Notwithstanding the fact that shrimp fishing occurs in the marginal sea off the coast in which the United States then had paramount rights, the court first determined that

South Carolina has a sufficient interest to exercise its police power over the area. The opinion went on to state that South Carolina's exercise of the police power violated the Privileges and Immunities Clause (Article Four, Section Two of the Constitution). In so doing, the court disposed of the McCready precedent on two levels——first viewing it as aberrational and, second, distinguishing it upon its facts. Several contrasts were drawn: McCready related to oysters, stationary in Virginia, while Toomer related to shrimp, migrants through the waters of several states; McCready related to inland waters, Toomer to marginal sea.[34] The court reasoned that South Carolina had less claim to ownership of the shrimp than did Virginia to the oysters, and could not discriminate against non-citizen fishermen.[35]

Both Maryland and Virginia still have laws in effect which extend preferential fishing rights to residents. Such regulations can only be justified under the McCready exception to the Privileges and Immunities Clause. It would seem that the question of whether McCready is still good law must await a future Supreme Court ruling.

G. Conclusions

The authorities cited above appear to work a neat allocation of the tidewater public domain of the Chesapeake Bay among and between Virginia, Maryland and the United States. Virginia and Maryland, within their respective borders, own all inland navigable waters, organic materials which they support, and submerged lands under them. In Virginia the tidewater public domain extends to mean low tide, in Maryland to mean high tide. The United States, as proprietor of the District of Columbia, owns the submerged lands appurtenant to the District. The United States also owns the marginal sea and the land under it to mean low tide, but has granted all land and natural resources back to the states. Paramount to all of these proprietary interests, however, is the power of the federal government to regulate commerce.

But these propositions may prove too much. In Toomer v. Witsell the United States Supreme Court said:

> The whole ownership in fact, is now generally recognized as but a fiction expressive in legal shorthand of the importance to its people that a State have power to preserve and regulate the exploitation of an important resource.[36]

The succeeding chapters will investigate the consequences that can be attributed to the states' ownership of these tidewater resources, the extent to which private individuals have acquired rights therein, and the allocation of regulatory and managerial powers among the federal, state and local governments.

* Notes *

I. THE PUBLIC DOMAIN

1. F. MAITLAND, THE CONSTITUTIONAL HISTORY OF ENGLAND 24 (1908).

2. *Id*. at 25.

3. R. STRINGHAM, MAGNA CARTA 51 (1966).

4. *Id*. at 33-34.

5. The Magna Carta was originally in Latin and the clauses were not numbered. The provision quoted in text and its number are taken from the translation in R. THOMSON, AN HISTORICAL ESSAY ON THE MAGNA CHARTA OF KING JOHN (1827).

6. *Id*.

7. *See* J. ANGELL, TIDE WATERS 25-27, n. 3 (1847).

8. 12 Edw. 4, C. 7 (1472).

9. J. ANGELL, TIDE WATERS 25-27, n. 3 (1847); 2 W. BLACKSTONE, COMMENTARIES 39-40 (1902).

10. *See* A. EMBREY, WATERS OF THE STATE 1-128 (1931) (prepared for the Virginia Commission on Conservation and Development, published by Old Dominion Press, Inc.).

11. *See* C. EVERSTINE, THE COMPACT OF 1785 31 (Legislative Council of Md. Research Rep. No. 26, 1946).

12. *Id*.

13. 41 U.S. (16 Pet.) 367, 410 (1842).

14. *See, e.g.*, Baltimore v. Canton Co., 186 Md. 618, 47 A.2d 775 (1946); Commonwealth v. Newport News, 158 Va. 521, 164 S.E. 689 (1932).

15. The Maryland rule is consistent with English common law. *See* Browne v. Kennedy, 5 H & J 195 (Md. 1821). The origin of the Virginia rule may be

disputed but it is now codified in the Virginia statutes. See Miller v. Commonwealth, 159 Va. 924, 166 S.E. 557, 561-67 (1932); VA. CODE ANN. § 62.1-2 (1950).

16. See Southern Pacific Co. v. Arizona, 325 U.S. 761, 767-70 (1945).
17. See Polland's Lessee v. Hagan, 44 U.S. (3 How.) 212 (1845).
18. United States v. California, 332 U.S. 19 (1947).
19. United States v. Louisiana, 339 U.S. 699 (1950); United States v. Texas, 339 U.S. 707 (1950).
20. 43 U.S.C., §§ 1301-03, 1311-15 (1964).
21. See C. EVERSTINE, supra note 11 at 29-34.
22. Id. at 32.
23. E. MATHEWS and W. NELSON, REPORT ON THE LOCATION OF THE BOUNDARY LINE ALONG THE POTOMAC RIVER BETWEEN VIRGINIA AND MARYLAND (1928).
24. Morris v. United States, 174 U.S. 196 (1899).
25. Mead v. Haynes, 24 Va. (3 Rand.) 33 (1824); Browne v. Kennedy, 5 H & J 195 (Md. 1821).
26. Boerner v. McCallister, 197 Va. 169, 89 S.E.2d 23, 27 (1955). The Virginia Court of Appeals has emphasized that the commercial use must be more than an occasional or exceptional one caused by a freak of nature. Ewell v. Lambert, 177 Va. 222, 13 S.E.2d 333 (1941).
27. See Wagner v. Baltimore, 210 Md. 615, 624-26, 124 A.2d 815, 819-20 (1956).
28. Id. In the application of the "navigability in fact" test, the Wagner court said that a stream is navigable if it can be traversed by small craft and that if a river is navigable lengthwise all of the waters between opposite shores are navigable.
29. Green v. Eldridge, 230 Md. 441, 446-47, 187 A.2d 674, 676-77 (1963).
30. McCready v. Virginia, 94 U.S. 391, 394 (1876).

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31. See, e.g., VA. CODE ANN. §§ 28.1-121 to 28.1-123 (1950); MD. ANN. CODE art. 66C, §§ 262, 698 (1957).

32. 94 U.S. 391 (1876).

33. 334 U.S. 385 (1948).

34. 334 U.S. at 401.

35. 334 U.S. at 402.

36. Id.

II.

THE PRIVATE DOMAIN

Chapter One dealt with the allocation of proprietary rights in the Chesapeake Bay among Virginia, Maryland and the United States. It was nominally concluded that each of the three jurisdictions could be said to own a portion of the waters and submerged lands. Ordinarily a primary incident of ownership is the power to transfer the owned property interest to another. This chapter deals with the extent to which Virginia and Maryland have transferred rights in Chesapeake Bay resources to private individuals.

A. Grants of Submerged Lands to Private Individuals

The most direct manner in which Virginia or Maryland can transfer rights in Chesapeake Bay resources to private individuals is by a formal grant of a portion of the state's interest in submerged lands. Such grants can either transfer submerged lands outright in fee simple or create more limited interests such as leases, easements or licenses.

1. Colonial Grants

The colonial proprietors in both Virginia and Maryland took their profit by making land grants.[1] Few such grants appear to have embraced land beneath the Chesapeake Bay. To the extent grants were made, they were generally attached to deeds of fast land adjacent to the water.[2] It is not surprising that when land was a seemingly boundless commodity, few individuals were interested in tracts that had to be reclaimed.

Some three hundred years after the colonial grants of submerged land were made, academic doubts can still be raised as to their validity. The dispute centers around the 1837 United States Supreme Court decision of Martin v. Lessee of Waddell.[3] Chief Justice Taney, speaking for the court, held by way of dicta that the King (since Magna Carta) had no power to grant an individual a portion of the soil covered by navigable waters so as to give him an exclusive right of fishery. This holding was supported by the theory that since the King held title to submerged lands in trust for the whole nation, such a transfer would be a breach of trust. Taney went on to decide the case by pointing out that, even if the King had this power, the charter he had given the Duke of York (the lord proprietor) was not broad enough to delegate it to him and that, therefore, grants of exclusive fishing rights made by the Duke of York were void.[4]

One commentator has suggested that this case stands for the proposition that all grants by colonial proprietors of land submerged under navigable water are void.[5] Alvin T. Embrey, in his book entitled Waters of the State, writes:

> . . . the inference is irresistible, that the great rights of dominion, and ownership in the navigable rivers, bays and arms of the sea, and the soils under them, in Virginia, as well as . . . in the other colonies, were not severed from sovereignty, but since Magna Charta were withheld from the Crown and lodged in Parliament; and, in the absence of parliamentary action of which there is no record which we have found, that these great rights of dominion and ownership of the rivers, bays and arms of the sea, and the soil under them, were not validly granted in any patent either by the Crown, by the Proprietors, or by the Colonial Governors; that they resided in Parliament; and that upon independence of the Colony of Virginia, they passed with other prerogatives and political and sovereign attributes to the General Assembly, or legislature in trust for all the people of the State.[6]

There are several problems with Embrey's analysis. First, it is based upon a rather stylized and simplistic notion of English constitutional history. Neither the Magna Carta nor any ensuing parliamentary enactment purported to divest the Crown of its proprietary interest in submerged land.[7] Perhaps the only statement that can fairly be made is that, at the time the Crown patented land to colonial proprietors, the respective prerogatives of Crown and Parliament were in flux. Second, the analysis purports to be based upon the United States Supreme Court case. Since the only question involved relates to the states' systems of real property (and not to questions of federal law or to federal constitutional questions), it seems state law should take precedence over the views enunciated by the federal judiciary.[8]

In Maryland it appears that grants of submerged land by the colonial proprietors, if still extant, are valid. In 1821, sixteen years before Martin v. Lessee of Waddell, the Maryland Court of Appeals upheld the validity of such deeds in Browne v. Kennedy.[9] Maryland courts have consistently recognized their validity ever since.[10] Whatever residual doubts continue to exist are further dispelled by a provision which has been included in every Maryland constitution since 1776, and which provides:

> And the Inhabitants of Maryland are also entitled to all property derived to them from, or under the Charter granted by His Majesty Charles the First to Caecilius Calvert, Baron of Baltimore.[11]

In Virginia the validity of grants by colonial proprietors of lands submerged under navigable waters may be more questionable. The only direct authority is found in several archaic cases concerning whether applicants seeking permission to construct water mills had proved as required by an act of the Virginia legislature that either they or the Commonwealth owned the bed of the abutting stream. In Home v. Richards, decided in 1798, three of the judges indicated through dicta that an applicant could meet this burden of proof merely by showing that the stream was navigable, since the beds of all navigable streams are owned by the Commonwealth and are not susceptible to being granted.[12]

But in Martin v. Beverly, decided in 1805, three of the five judges indicated that colonial proprietors could validly grant land submerged under navigable waters to private individuals.[13] The court also pointed out that several acts of the General Assembly then in effect recognized the validity of such deeds. The most recent codification of Virginia laws also may recognize their validity. Section 62.1-1 provides:

> All beds of the bays, rivers, creeks and the shores of the sea within the jurisdiction of this Commonwealth, and not conveyed by special grant or compact according to law, shall continue and remain the property of the Commonwealth of Virginia . . . [14]

The term "special grant" is certainly broad enough to embrace grants by colonial proprietors, but could be interpreted to apply only to grants following independence.

2. Grants Authorized by State Legislatures

While lingering doubts persist as to the validity of colonial grants, it appears that the Maryland and Virginia legislatures, except to the extent they are limited by their respective state constitutions, have plenary power to make grants themselves of the state's interest in land under navigable waters, or to vest administrative agencies with this power.[15]

The Maryland Constitution places no direct limitations on the power of the legislature to dispose of public lands. Historically the legislature exercised this power by creating a Land Office which could patent vacant lands to private individuals according to a procedure established in the statute.[16] This patent procedure is still in existence, but since 1862 there has been a provision in the code which precludes the issuance of patents for land covered by navigable waters.[17]

Although the Land Office is no longer empowered to grant land submerged under navigable waters, the Maryland legislature has created several other ways in which interests in submerged lands may be transferred to private individuals. Most important of these is a provision of the Maryland Code which authorizes the Board of Public Works (composed of the Governor, the Comptroller and the Treasurer) to sell, lease, or grant any real property of the state to any person, corporation or governmental body.[18] Real property of the state is explicitly defined to include "the inland waters of the state and land under said waters." Additional statutory provisions authorize the Board of Public Works to grant sand and gravel dredging rights,[19] and the Department of Chesapeake Bay Affairs to lease oyster and other shellfish beds.[20]

The only provision of the Virginia Constitution which restricts legislative powers to dispose of submerged land is Section 175, which prevents the legislature from leasing, renting or selling "natural oyster beds, rocks and shoals."[21] Working within this limitation Virginia has established a variety of ways in which the submerged land can be granted. An 1819 statute provided that:

> hereafter the limits or bounds of the several tracts of land lying on the Atlantic Ocean, the Chesapeake Bay, and the rivers and creeks thereof with this Commonwealth, shall extend to ordinary low water mark; and the owners of said lands shall have, possess and enjoy exclusive rights and privileges to, and along the shores thereof, down to ordinary low water mark . . .[22]

While doubts can be raised as to whether this was an omnibus grant or merely confirmed existing law,[23] it had the effect of assuring to riparian owners property rights in the fore-shore in derogation of the common law. This principle is still given statutory recognition today.[24]

Since 1792 the Virginia legislature has exempted submerged lands from the authority of the Land Office to grant unappropriated land,[25] but several other ways have been provided through which private individuals can acquire a more limited interest in the beds of state waters. Section 62.1-4 of the Virginia Code authorizes the Marine Resources Commission, with the approval of the Attorney General and the Governor, to grant easements and make leases.[26] Section 28.1-109 enables the Commission on Fisheries to lease oyster beds,[27] if the lands to be leased are not part of the state's natural oyster beds.

The federal government also has a proprietary interest in the submerged land appurtenant to the District of Columbia and to some of the other reservations which have been ceded to the federal government by Virginia and Maryland.[28] On several occasions the United States Supreme Court has recognized the power of Congress to grant lands below navigable waters in territory over which they have a proprietary interest. The court has said that such grants may be made if necessary "to perform international obligations, or to affect the improvements of such land for the promotion and convenience of commerce with foreign nations and among the several States, or to carry out other public purposes appropriate to the objects for which the United States hold the Territory,"[29] but that such grants "are not lightly to be inferred, and should not be regarded as intended unless the intention was definitely declared or otherwise made very plain."[30] These cases dealt with grants of western territorial lands before states had been established in the region, but nevertheless are broad enough by their terms to embrace eastern lands ceded by the states to the federal government.[31]

B. Riparian Rights: Maryland

Chesapeake Bay's resources have been widely used since the founding of Virginia and Maryland. In colonial days land abutting on the Chesapeake sold at a premium because of its proximity to the only significant transportation system.[32] Owners of contiguous land used the Bay not under any claim of legal right, but because it was there.

In the early nineteenth century, however, courts were called upon to explain these existing uses and to determine the correlative rights of owners of land abutting on streams. They did so by creating the doctrine of riparian rights which gave all riparian owners a right to make reasonable use of the waters.[33] While the cases which gave rise to this development involved rights of owners of land abutting on fresh water streams, over the years these rights transmuted to owners of land abutting on estuarine waters. Hence, in both Maryland and Virginia there is common law authority giving riparian land owners access to and reasonable use of adjacent navigable waters.[34] In truth, though, the present structure of riparian rights is the result of the inter-action of two legal institutions—the courts and the legislatures. To examine this proposition, it is necessary to look separately at Maryland and Virginia.

While the courts took the initiative in establishing broad guidelines covering the extent to which riparian land owners could use adjacent waters, the Maryland General Assembly has given riparian owners a variety of specific preferences in the use of Bay resources. These preferences relate to shoreline development, the taking of sand, gravel and other minerals, the taking of shellfish, and fishing and hunting rights.

1. Shoreline Development

In the eighteenth and nineteenth century the Maryland courts came to recognize that riparian land owners were entitled to accretions—increases in land area formed by gradual recession of waters or accumulation of soil.[35] During the same period the Maryland General Assembly passed a series of laws authorizing riparian owners to construct offshore improvements. Part of the act which incorporated Baltimore in 1745 provided that within the town "all improvements, of what kind so ever, either wharfs, houses, or other buildings, that have or shall be made out of the water, or where it usually flows shall (as an encouragement to such improvers,) be for ever deemed the right, title and inheritance of such improver, their heirs and assigns for ever."[36] The Court of Appeals interpreted this language to give these rights only to owners of riparian land.[37] The enactment was supplemented in 1835 by a law giving riparian land owners throughout the state permission to construct wharves.[38]

The 1860 codification of Maryland laws in effect repealed the 1745 statute, leaving in force with only minor changes the 1835 statute. The provision in the Code dealing with the right to make improvements read as follows:

> Any person owning real estate in fee simple, or having therein an estate for years renewable forever, on any of the navigable waters of this State, may construct wharves thereon, and extend the same such a distance into the stream as may be required to admit the safe approach thereto of any vessel navigating said waters; Provided, said wharves be not extended so as to interfere with the fishing or navigation of said waters.[39]

The 1860 Code raised doubts as to whether riparian land owners were still entitled to accretions and to construct improvements other than wharves.[40] After only a two year hiatus, the General Assembly passed a detailed statute in an effort to resolve these doubts. These provisions are still in effect today in Article 54 of the Annotated Code of Maryland and are set forth in their present form below:

> Sec. 45 Accretion to land on navigable river
>
> The proprietor of land bounding on any navigable waters of this state shall be entitled to all accretions to said land by the recession of said waters, whether heretofore or hereafter found or made by natural causes or otherwise, in like manner and to like extent as such right may or can be claimed by the proprietor of land bounding on water not navigable.
>
> Sec. 46 Right to make improvements in front of land on navigable river
>
> The proprietor of land bounding on any of the navigable waters of this state shall be entitled to the exclusive right of making improvements into the waters in front of his said land; such improvements and other accretions as above provided for shall pass to successive owners of the land to which they are attached, as incident to their respective estates. But no such improvements shall be so made as to interfere with the navigation of the stream of water into which said improvement is made.
>
> Sec. 48 Patent not to affect riparian rights nor issue for land covered by navigable waters
>
> No patent hereafter issued out of the Land Office shall impair or affect the rights of riparian proprietors, as explained and declared in Sections 45 and 46; and no patent shall hereafter issue for land covered by navigable waters.

These three sections have not served their articulated purpose of solving the doubts over the right to accretions and the right to make improvements. Over the past one hundred and six years the Maryland Court of Appeals has made great efforts to decide what they mean. What has been provided, however, is a mechanism through which the courts have resolved disputes between riparian land owners and those claiming title to the bed or a right to use navigable waters, and disputes among riparian land owners themselves.

a. Riparian Land Owners Versus Those Claiming Property Rights to the Bed— One of the basic purposes for the Act of 1862 was to prevent disputes between riparian proprietors and those claiming title to offshore beds. This was sought to be accomplished by the provisions in Section 48 which prohibit the issuance of patents by the Land Office of lands covered by navigable waters, or patents which might otherwise impair riparian rights. To a limited extent this purpose has been accomplished. On a number of occasions the Land Office and the courts have refused to issue patents because the desired land was under navigable waters.[41]

But disputes can still arise. Since the Act of 1862 merely prohibits the issuance of patents after its effective date, there can still be disputes between riparian land owners and the present holders of pre-1862 patents. More importantly, the Act of 1862 only precludes the Land Office from issuing patents, and as has been seen, the legislature can and has established other procedures through which the state can transfer interests in submerged lands.

On the two occasions when the Court of Appeals has been called upon to resolve this type of dispute, they have done so using a "first in time, first in right" approach. In Linthicum v. Coan[42] the Court of Appeals faced a controversy over land formed by accretion in the Patapsco River abutting on the boundary of the riparian land owner's land and within the boundary of submerged land patented to a pre-1862 patentee. The court held for the riparian land owner (since the patent to his land was initially granted prior in time to the grant of the other patent), reasoning that there was a common law right to accretions, of which the state legislature had never acted to deprive the riparian proprietor, and that the subsequent patent to the submerged land transferred no greater interest than that held by the state. In Culley v. Hollis[43] the plaintiff, lessee of an oyster bed, brought suit to enjoin the owner of riparian land from constructing a pier over his oyster bed. The court refused to grant the injunction, holding that when the plaintiff acquired the lease he was on notice of the rights of the riparian proprietor to make improvements (now Section 46) and, therefore, took subject to those rights.

The most important current dispute comes up in a slightly different context. Increases in the value of shore frontage have encouraged riparian proprietors to seek to fill wetlands in front of their property for development purposes. If the wetlands are inundated by tidal action (and hence, below mean high tide), the question arises as to whether riparian proprietors can fill as a matter of right (subject to federal and state regulations relating to navigation) or whether the riparian proprietor must first acquire the state's property interest in the inundated land.

Ostensibly Sections 45 and 46 give the riparian land owner the right to fill and acquire title to the improved land without receiving a formal grant from the state. However, the Attorney General of Maryland has recently ruled that Sections 45 and 46 do not give riparian land owners an unfettered right to engage in landfill operations, but only a right to make improvements necessary to preserve the land owner's access to the waters.[44]

The reasoning of the Attorney General was two-pronged. He decided through the use of a series of hyper-technical analyses that the substantial landfill project contemplated by the riparian was neither an "accretion" nor an "improvement."[45] Alternatively, it was reasoned that the law (as a dynamic process) should take into account changes in circumstance since 1862; therefore, since new technology permits filling projects not then contemplated, and since navigable waters have become a great outdoor recreation center, the statutes should not be construed in such a way as to deprive the people of substantial acres of water without some additional permission from the state.[46]

To the extent that the above-noted opinion stands for these propositions—that Sections 45 and 46 were not originally intended to authorize artificial landfill projects by riparians, or that past decisions of the Maryland Court of Appeals have not viewed Sections 45 and 46 as authorizing such projects—it appears incorrect. The language used in Sections 45 and 46 would seem to be broad enough to embrace artificial landfill projects. Section 45 provides that owners of land bounding on navigable waters shall have the same rights to accretions by virtue of recession of waters from either natural causes or "otherwise," as do owners of land bounding on non-navigable streams. Since it had been resolved prior to 1862 that owners of land bounding on non-navigable waters were entitled to accretions, the apparent intent of the statute was to give navigable riparian owners on navigable waters the same rights. Although the syntax of Section 45 leaves something to be desired, that natural increases in the shoreline (accretions) be treated interchangeably with man-made increases appears to have been intended. This construction is buttressed by the language of Section 46, which lumps together "improvements" with "other accretions" and provides that they shall all belong to the abutting riparian land owners.

Historical considerations seem also to support the right of the riparian owner to fill lands adjacent to his property. The earliest progenitor of Section 46 gave riparians in Baltimore City the right to make "improvements," "as an encouragement to such improvers."[47] The response to this authorization, which was not repealed until 1860,[48] was so enthusiastic that the shape of the harbor was changed from a concave figure to a rectangular figure.[49] Against this backdrop, it appears likely that when the General Assembly in 1862 (over two years after repeal of the Act of 1745 statute) used the identical word, "improvements," it intended that riparians throughout the state have similar privileges.

Cases decided under the 1745 statute uniformly recognized that riparian owners had the power to fill,[50] subject only to the regulatory power vested in Baltimore City to protect navigation.[51] Dicta in various cases decided under the 1862 statutes recognize the right of riparians to fill and acquire title to the land created,[52] and the one case dealing with artificial landfill under the 1862 statute acknowledges the rights of the abutting riparian.[53]

To the extent that the Attorney General Opinion is viewed as a conservationist brief (arguing that it would not be in the public interest to construe Sections 45 and 46 in such a way as to give riparians an unlimited right to engage in artificial landfill operations), it is persuasive and may well convince the Maryland Court of Appeals. Furthermore, in a very real sense, the Attorney General's Opinion has the operative effect of law. The Board of Public Works is presently functioning on the assumption that riparians must purchase land from the state in order lawfully to engage in substantial offshore filling projects. In 1968 the Board adopted a policy that filling of wetlands will be authorized only if the riparian conveys to the state two acres of wetlands of equal ecological value to every one acre of wetlands he fills.[54] This approach presents certain conceptual difficulties, since in a legal sense the riparian owner will not ordinarily own any interest in other wetlands, to convey. In its implementation, however, the Board has merely required riparians to quitclaim their rights in wetlands adjacent to other lands which they own.

b. Riparian Proprietors Versus Those Seeking to Use the Navigable Waters of the State——The right of the general public to use navigable waters as a means of transit has been recognized since before the Magna Carta.[55] Section 46, Article 54 of the Annotated Code of Maryland recognizes the limitation this principle imposes on riparians' use of navigable waters by stipulating that no improvement shall interfere with navigation. This principle is also implemented by laws which require licenses from both federal and state administrative agencies as a prerequisite to construction projects or filling operations in navigable waters.[56]

The Maryland Court of Appeals has also recognized that riparians have no grounds for objecting to certain other uses of navigable waters by the public. Generally, until the riparian owner exercises his right to make improvements, he cannot complain of the use by others of the water abutting his property.[57] Courts have held that the riparian land owner has no grounds for objecting to use, by a lessee of the state, of an oyster bed abutting his fast land,[58] or to the erection of a crabhouse which neither attached to mainland nor limited his access to the water.[59]

On the other hand, certain objections by riparian owners to the use of navigable waters have been upheld. In Garitee v. Baltimore,[60] it was decided that a riparian owner had a valid cause of action in nuisance against the City of Baltimore where he showed that the city was dumping the refuge from a dredging operation adjacent to his land and obstructing his access to the water. It has also been held that a riparian can enjoin the removal of gravel from the bed of a body of water adjacent to his land, since the activity retards the process of accretions (the right to which is guaranteed the riparian by Section 45 of Article 54).[61]

c. Riparian Proprietor Versus Riparian Proprietor—Although Chapter 9 of the Act of 1745, (which authorized improvements in Baltimore Harbor) was unclear, courts decided at an early point in time that the improvements authorized were to be in front of the riparian owner's own lots and not in front of those of their neighbors.[62] The requirement that improvements be in front of the riparian's property was carried forward and expressly incorporated into the 1862 statute.[63] The court has likewise held that a natural sandbar belongs to the riparian owner before whose land it rests, regardless of the fact that it is attached to his neighbor's shore.[64]

The courts, however, have never clearly decided what constitutes the "front" of a lot. If the shoreline is relatively straight, the front of each lot can be delimited by extending the divisional lines into the water, perpendicular to the shore.[65] Where the shoreline is irregular, the problem of which riparian proprietor can improve, where, becomes difficult.

The Court of Appeals originally endeavored to resolve this sort of conflict with a "first in time, first in right" theory. In Wilson's Lessee v. Inloes[66] and Baltimore & O. R.R. v. Chase,[67] the court ruled that in the event the curvature of the shoreline resulted in overlapping "fronts," priority in the improvement or right to make the improvement went to the holder of the oldest patent to the land. The court reasoned that the state, having once patented the land, could not subsequently derogate the right to make improvements implicit in the patent.

This technique of determining priority is obviously objectionable, since it turns upon a coincidental and generally long forgotten incident. When it is used by the holder of a senior patent to divest the holder of a junior patent of ownership of an improvement which the latter has constructed and financed, this technique is particularly objectionable. Although it was permitted to happen in Wilson's Lessee v. Inloes, the court avoided this untoward result in Baltimore v. Baltimore & Philadelphia Steamboat Co.[68] There, Baltimore City broadened Light Street out into the harbor, taking a strip of pier from the steamboat company. The city argued that since it owned land abutting on the harbor at a right angle to the steamboat company's pier, and since the steamboat company's pier was in front of its property, and since the patent to its land was senior to the patent to the steamboat company's land, that the city should not have to pay compensation for the taking. The court avoided this result by pointing out that both patents pre-dated 1745, the date when the General Assembly first gave riparians the right to make and acquire title to improvements; hence, neither patent holder had a claim senior to the other.

Although Baltimore & O. R.R. v. Chase and Wilson's Lessee v. Inloes have never been expressly overruled, they have been in recent times largely ignored. In Baltimore v. Baltimore & Philadelphia Steamboat Co., the court indicated that when the shoreline is concave, the right to make improvements should be proportionately divided among the riparian owners.[69] In Mutual Chemical Company of America v. Baltimore, a Federal District Court, applying Maryland law, formulated the following paradigm which geographically apportions riparian rights:

> If the shore line is straight, the riparian lines are to be extended from the divisional lines of shore into the water, perpendicular to the shore line. If, on the other hand, the shore line is concave, converging lines shall be run from the divisional shore lines to the line of navigability. If the shore lines are convex, the lines will be divergent to the line of navigability.[70]

The court went on to order Baltimore City to abide by an agreement it had made which apportioned the right to make improvements in Baltimore Harbor among riparians by establishing dividing lines running from the shore divisional lines at right angles to the harbor line.

On appeal, however, the portion of this opinion which gave riparians protected rights in geographically delimited sections of the water area was reversed.[71] The Federal Circuit Court of Appeals held that the state retained the power to dictate where riparians may locate improvements, so as both to effect an equitable apportionment among riparian owners and to protect the safety and welfare of the public. The court further found that the state had delegated this power as it effects Baltimore Harbor to the city, and that, therefore, the settlement of divisional lines between properties had to await action by the city.[72]

Subsequent Maryland Court of Appeals cases have adopted and elaborated upon the Federal Circuit Court's view of Maryland law. In Feudale v. Sarles,[73] the plaintiff brought suit in equity complaining that his neighbor had constructed a pier which encroached on the offshore "front" of his property. The lower court established divisional lines on the irregular shore, decided that the defendants had encroached on the plaintiff's "front" and enjoined the defendants to remove the encroaching portion of this pier and bulkhead. On appeal, the Court of Appeals reversed. The court reasoned that, since the plaintiff had not sought permission to wharf out from the port wardens of Annapolis (the local government officials to whom the state had delegated its legislative power), the lower court should not have undertaken to establish divisional lines between the parties, and that since the plaintiff had tacitly acquiesced in the defendant's construction project, the lower courts should not have required the defendant to tear down his pier. The court added that the pier in this case did not materially interfere with the plaintiff's use of his property, and held that, if the defendant were to change the pier's location so that it did materially interfere with the plaintiff's rights (even if the port wardens of Annapolis approved the change), then the plaintiff would have the right to apply to the courts for relief.

In Causey v. Gray,[74] the plaintiff petitioned in equity to have a division line drawn between his and his neighbor's property. The original shoreline formed an obtuse angle. His neighbor, the defendant, had dredged and filled, thereby extending the shoreline into the water. The lower court established a divisional line which proportionately divided the landfill between the original property lines and the water. The Court of Appeals affirmed this division. In reaching its decision, the court intimated that the Chancellor's power to draw divisional lines would have been preempted if the state had delegated its power to establish riparian divisional lines to some other governmental agency.

This line of cases, although not clearly defining the correlative rights of riparian neighbors to improvements and accretions, does establish certain guidelines. It appears that riparians do not have exclusive rights to geographically circumscribed areas. Rather, the state has reserved the power to determine whether a riparian may make and claim title to an improvement or claim title to an accretion, on a case by case basis. The state may delegate this power to an administrative body, but if it does not, a court of equity may exercise the power. The administrative body or the court of equity will ordinarily attempt to divide the area in which improvements may be made or title to accretions proportionately among the riparian proprietors. However, they may also take into account the general public welfare and apply principals of estoppel where one riparian has either expressly or impliedly permitted his neighbor to construct an improvement.

2. Sand, Gravel and Other Minerals

Throughout the 1800's riparian land owners exacted a profit by selling the sand and gravel found on their beaches to individuals who hauled it away in carts and barrows. The Maryland Court of Appeals preserved this right exclusively for the riparians by ruling that even though a taker might only take from below the high water mark, (and hence, outside the boundaries of the riparian's land), such action would still infringe on the riparian's rights by retarding the development of accretions.[75]

The development of the mechanical dredge, with which sand and gravel could be efficiently taken from the bed of navigable waters, threatened these profits. The Maryland Court of Appeals ruled that riparians had no common law property rights in offshore deposits.[76] The Maryland General Assembly, however, proved more solicitous of the riparian land owner's prerogatives. In 1888, responding to the petition of land owners along the Potomac, it passed a law making it a criminal offense to "dig, dredge, take and carry away any sand, gravel or other material from the bed of the Potomac River from its mouth to the uppermost boundary line of Prince George's County . . . "[77]

This criminal prohibition has over the years evolved to give riparian owners certain additional rights. Chapter 577 of the Laws of 1900 added a proviso which permitted owners of land bordering on the Potomac or their licensees to dredge from the bed of the river opposite their land out to the channel nearest their shore. Chapter 426 of the Laws of 1906 extended the application of both the prohibition and the proviso to all "the navigable rivers, creeks or branches of this state." Chapter 598 of the Laws of 1957 modified the section so that the proviso, creating certain rights in riparian owners, only applied to those owning land in Maryland.[78]

In its present form, the statute is found in Section 485 of Article 27 of the Annotated Code of Maryland and reads as follows:

> It shall not be lawful for any person to dig, dredge, take and carry away any sand, gravel or other material from the bed of any of the navigable rivers, creeks or branches of this State . . . provided, however, that it shall be lawful for any riparian owner of lands in the State of Maryland bordering on said rivers, creeks or branches, or for any person or corporation with whom such owner shall have a contract in writing for the purpose, or for the agents, servants or employees of such person or corporation, to dig, dredge, take and carry away sand, gravel or other materials from the bed of said river opposite said lands from high water mark on the shore bordering on said lands to the outer line of said channel nearest said shore, subject to the laws of the United States relating to navigation; and where no riparian owner is given by this section the lawful right to dig, dredge, take and carry away sand, gravel or other materials from the bed of said river opposite said lands from high water mark on the shore bordering

> on said lands to the outer line of the channel farthest from said shore to the opposite shore, subject to the laws of the United States relating to navigation, the Board of Public Works may grant, for an adequate consideration in money, and subject to such conditions as it may impose, to any person or corporation the right to dig, dredge, take and carry away said sand, gravel or other materials; and provided further, that none of the provisions of this section shall be deemed to interfere in any manner with the provisions of any law relating to the taking and catching of fish and oysters.

The Maryland General Assembly has also created several other ways by which private individuals can acquire rights in submerged sand, gravel and minerals. Article 78A, Section 15 of the Annotated Code of Maryland provides a procedure whereby the Board of Public Works can sell any interest in state property. It has been held, however, that this section does not give the Board authority to derogate the rights given riparians by Article 27, Section 485.[79] Article 66C, Sections 22-30 allow a procedure whereby private individuals may purchase rights to "rare earth and minerals from under the public navigable waters of the Chesapeake Bay" from the Board of Natural Resources, but Section 30 expressly states that these sections shall not be held "to invalidate or curtail in any way the rights of riparian owners set forth in Section 485 of Article 27." Article 66C, Section 13B provides a procedure whereby any person may be granted a permit "to extract sand, gravel, rare earth, minerals, or any other resource from the public navigable waters of the Chesapeake Bay (not including tributaries and estuaries of the Bay)."

Notwithstanding this profusion of legislation, unresolved problems of definition leave in question the nature and extent of the riparian land owner's mineral rights. The confusion is aptly illustrated by a 1964 dispute which arose when a riparian land owner sought to dredge three million cubic yards of material from the bottom of Assawoman Bay to be used to create new fast land contiguous to the existing shoreline. The Attorney General of Maryland ruled that Section 485 of Article 27 did not give the riparian the right to engage in this dredging but that such rights could be acquired from the Board of Public Works pursuant to the procedures outlined in Article 78A, Section 15.[80] The reasoning of the Attorney General was two-pronged. First, Section 485 applies only to "rivers, creeks or branches" and not to "bays." Second, the phrase "sand, gravel or other materials" in Section 485 includes only materials suitable for commercial uses and not every quality of material on the bay bottom.

But the dichotomy which the Attorney General creates between "rivers" and "bays" is of little utility in determining which owners of land contiguous to the Chesapeake Bay have dredging rights. From a scientific perspective, the semi-enclosed coastal waters of Maryland and Virginia make up an estuarine zone—an area in which sea water is measurably diluted with fresh water.[81] Section 485, as originally enacted in 1888, applied to those portions of the Potomac which are in this estuarine zone. The 1906 amendment increased the scope of the statute to "navigable rivers, creeks and branches." The traditional test of navigability is whether the waters are effected by ebb and flow of the tide. Since waters so effected are necessarily estuarine, the statute only applies to riparians owning land contiguous to the estuarine zone. On occasion, the whole estuarine zone is referred to as the Chesapeake Bay, but more typically this label is applied only to the main arm of the system. Various smaller arms of the zone popularly and politically are labelled as bays, branches, creeks, rivers and sounds. These labels have no clear denotative significance, nor is there a recognized scientific criterion for distinguishing them from the Bay proper. Does then Section 485 extend mineral rights to riparians who own land which is contiguous to arms of the estuary that happens to be called a "river, creek or branch," or to arms of the estuary which are in fact a "river, creek or branch" according to some obscure objective criterion, or to the whole of the estuarine zone? The Attorney General's Opinion provides no workable guide for answering this question. Nor does the statute.

The Attorney General's second argument—that the authorization in the statute which permits the taking of "sand, gravel or other material" does not permit the dredging for landfill purposes—can only be understood in the context in which the opinion was written. Patent in the opinion is a desire to protect the marshlands of the state from destruction. One way to accomplish this goal is to curtail the riparian owners' rights to dredge, thereby making landfill operations less economically viable. But even accepting this bias, the result is difficult to justify.

Certainly in terms of conventional usage, an authorization to take "other material" gives riparian land owners an open-ended permission to take whatever they choose from the bottom. The Attorney General attempts to avoid this seemingly inescapable conclusion through the application of a rule of statutory construction—ejusdem generis. General words following particular words in a definitive series are to be treated as including only things of the same general kind or class as those specifically mentioned. The Attorney General goes on to say:

> . . . 'other materials' can properly be said to include only grades of submersed soil specially suited for commercial use, as, for example making concrete or for road or dike construction, but not the generality of bottom material which one may find suitable as ordinarily fill with which simply to build up fast land.[82]

But this technique begs the question. The result is reached by defining the genus. Moreover, even accepting the Attorney General's definition of the genus—"submersed soil specially suited for commercial use"—it appears that in light of the increased demand for filling, "the generality of bottom materials" would be included.

Notwithstanding these weaknesses in the Attorney General's Opinion, the Board of Public Works is presently accepting it. Hence, until and unless it is overruled by the courts, riparian land owners do not have the right to dredge the generalities of bottom materials for landfill purposes.

3. Fishing and Hunting

The Maryland General Assembly has also extended fishing and hunting preferences to owners of riparian land. Article 66C, the natural resource article of the Annotated Code of Maryland, contains these provisions. Section 154 gives to riparians first choice in establishing the position of a duck blind in front of their property. Section 161 complements this section by providing a method for the drawing of dividing lines between adjoining properties for the purpose of determining the proper location of duck blinds. Section 171 provides a technique through which the owner of land bordering upon the Chesapeake Bay can annually establish a gunning preserve in front of his property. Section 253 establishes a procedure whereby owners of any land bordering on a tidal tributary of the Bay are given first choice in positioning nets in front of their property for commercial fishing purposes.

C. Riparian Rights: Virginia

During the 1800's the Virginia legislature did not follow the lead of Maryland in attempting to codify the rights of tidewater riparians. Hence, a Virginia court writing in 1904 could describe the rights of a riparian land owner, without bogging down in the specificity of statutory language, in the following generalities:

> [T]he riparian owner has certain rights. . . enumerated as follows:
>
> First: The right to be and remain a riparian proprietor and to enjoy the natural advantages thereby conferred upon the land by its adjacency to the water.
>
> Second: The right of access to the water, including a right of way to and from the navigable part.

> Third: The right to build a pier or wharf out to navigable water, subject to any regulations of the state.
>
> Fourth: The right to accretions or alluvium.
>
> Fifth: The right to make a reasonable use of the water as it flows past or laves the land.[83]

Pressures of the twentieth century, however, have forced the Virginia General Assembly to allocate some riparian rights more specifically. These statutory addendums can be placed in four categories: rights to shorefront development, rights to sand and gravel, shellfish rights, and hunting rights.

1. Shorefront Development

Since under Section 62.1-2 of the Virginia Code riparians hold title to the low-water mark,[84] the right to make improvements on the foreshore are explained as ownership prerogatives rather than as riparian rights. But the construction of piers, docks, landings, bulkheads, jetties and other structures which extend below mean low tide must be justified as exercises of riparian rights. The Virginia courts initially recognized common law rights of riparians to build such structures.[85] More recently this right has been given explicit statutory recognition. Section 62.1-164 of the Virginia Code provides:

> any person owning land upon a watercourse may erect a wharf on the same, or pier or bulkhead, in such watercourse opposite his land; provided navigation be not obstructed, nor the private rights of any person be otherwise injured thereby . . .

In addition the Virginia legislature has passed a variety of laws regulating the construction of offshore improvements and resolving conflicts between those seeking to make offshore improvements in front of their land and those holding some interest in the submerged bed. The earliest form of such regulation authorized harbor commissioners to establish port warden's lines beyond which riparian owners could not extend their wharves or other structures.[86] Today the riparian's right to construct offshore improvements is limited and defined by a variety of provisions of the Virginia Code. Section 62.1-3 makes it a misdemeanor to build on submerged land without first obtaining authority from the Marine Resources Commission, but explicitly exempts from this stricture the following projects: sea wall and jetties incident to controlling erosion; private docks and landings for non-commercial use; and fills by riparian owners to an established bulkhead line. Generally then, a riparian owner may without a permit build structures necessary to protect his land against erosion or to enhance his access to the water, but must procure a permit to develop his offshore front commercially. Section 62.1-164 complements this provision by giving county circuit courts power to abate any wharf, pier or bulkhead which is found to obstruct navigation or to interfere with the free use of any private landing.

The Virginia legislature has also specifically resolved the potential conflict between riparian owners and those holding leases to oyster grounds. Section 28.1-118 sets up a procedure whereby a land owner who desires to erect a bulkhead or wharf, or to open a channel to reach navigable water, may take such portion of the oyster grounds necessary for the project. This preference is hedged by two restrictions. First, the land owner must show that he does not already have riparian rights in other bottoms suitable for his purpose. Second, the land owner is required to compensate the lessee for the taking if it is for the purpose of constructing a channel.

The Virginia legislature has left to the courts, however, the problem of resolving disputes between riparian land owners. Such disputes are inevitable under a riparian system which gives to each owner the right to use the water and submerged land in front of his land, since on an irregular shoreline there is no clear guideline as to how divisional lines should be drawn.

It has been held that courts of equity are the proper tribunals to make the necessary apportionment and establish boundary lines for the coterminous owners.[87] In the exercise of this power the courts have made an effort to give each riparian a parcel of land under the water proportionate to the length of his shoreline. To achieve this result, several courts have suggested the following rule of division:

> measure the length of the shore, and ascertain the portion thereof to which each riparian proprietor is entitled; next measure the length of the line of navigability, and give to each proprietor the same proportion of it that he is entitled to of the shore line; and then draw straight lines from the points of division so marked for each proprietor on the line of navigability to the extremities of his lines on the shore.[88]

This rule of division has, of course, a serious weakness. Unless the courts are concerned with the whole of a separable physiographic unit of shoreline they will be unable to measure the length of the line of navigability, since they will have no way of knowing what segment of this line can be attributed to the shoreline in question. The only way in which the court could extricate itself from this dilemna would be to draw all of the divisional lines for the separable physiographic unit, and this would often prove to be a gigantic undertaking.

2. Sand and Gravel

In 1920 the Virginia General Assembly passed legislation which made it a misdemeanor to take sand or gravel from fast land or beach abutting on, or the submerged beds of, Virginia waters. The real intent of the legislature, however, appears to have been to create certain exclusive rights in riparian owners, since riparians or their licensees are exempted from the prohibition and riparians are given a private remedy of injunction and treble damages calculated on the basis of the value of the material removed. This legislation is presented in the Code of Virginia, Sections 62.1-190, 62.1-191, 62.1-192, and 62.1-193.

These statutes fail to define clearly the scope of the riparian's rights. Section 62.1-193 which is the last section of the legislative package exempts from the prohibition, owners or their licensees, who dredge "such deposits" from in front of their land. Since the Section 62.1-190 distinguishes between deposits in general and deposits which "extend uninterruptedly from low-water mark out into the bed of such waters," the antecedent of the term "such deposit" is unclear. Assuming, however, that the riparian's right is to be coextensive with the private remedy given him by Section 62.1-192, he is entitled only to such deposits which extend uninterruptedly from low-water mark. This construction is tacitly supported by the case of United States v. Smoot Sand & Gravel Corporation.[89]

It is also difficult to correlate the right to sand and gravel which these sections give riparians and other sections of the Virginia Code which permit private individuals to acquire rights in submerged lands. Section 62.1-193 does expressly make the sand and gravel rights of the riparian subject to any rights private individuals might have in oyster grounds. But there is no similar reconciliation of the rights of the riparian as against the holders of a dredging permit or of a mineral lease. Section 62.1-3 establishes a procedure whereby individuals may be given a permit to remove bottom material for a fixed royalty, and Section 62.1-4 sets up machinery whereby the state can grant easements or make leases of the beds of state waters which may authorize the taking of mineral substances. These sections present the real possibility of a direct conflict between the rights of the riparian and the rights of the holder of a permit, lease, or easement.

The only clue that the statutes provide as to how such a dispute would be resolved is found in Section 62.1-192, which gives the riparian a private remedy to protect his interest in sand and gravel. There it is provided that the riparian can only enjoin the removal of a deposit if the removal is "without authority of the State." This language would seem to indicate that the holder of a permit, lease, or easement has rights superior to those of the riparian.

Conversely, the case of Norfolk Dredging Co. v. Radcliff Materials Inc.[90] might be said to create some slight implication that the rights of the riparian are superior to the rights of other parties taking bottom material under authority of the state. In this case the plaintiff had dredged a channel to improve its access to a spoil disposal area, pursuant to a permit issued by the Army Corps of Engineers but apparently without any particular authority from the State of Virginia. The defendant, pursuant to a contract with the Virginia Commissioner of Fisheries, was dredging submerged oyster shells.[91] The plaintiff brought suit alleging that the defendant's shell-dredging operations had damaged its channel. One of the theories the plaintiff advanced was that the United States Government had transferred to it the riparian rights the government held as owners of nearby Craney Island, and that the defendant had violated these rights. The court found that the United States Government had not conferred any riparian rights on the plaintiff and held for the defendant. But in so deciding, the court created at least a slight implication that if the plaintiff had held riparian rights they would have been superior to the rights the defendant held under his contract with the state.

No clearer authorities have been found. Hence, the rights of a riparian owner to sand and gravel can be defined with some specificity, but the correlation between these rights and the rights other parties have acquired in bottom material from the state is in doubt.

3. Shellfish

Under Section 28.1-108 of the Virginia Code, owners of land bordering on bodies of waters in oyster-growing areas may be assigned private oyster grounds. This section limits the right to such an assignment in a variety of ways. In order to qualify for an assignment the riparian owner must have at least one hundred and five feet of shore frontage; assignments are limited to one-half acre of ground; and assignments pass with the adjacent highland and cannot be separated.

Section 28.1-108 is complemented by Section 28.1-109 which denotes a procedure whereby "[t]he residue of such waterfront in excess of what is already assigned or is reserved for riparian owners" may be leased to other private parties. Both Sections 28.1-108 and 28.1-109 are limited by Section 175 of the Virginia Constitution which precludes the granting of "natural oyster beds, rocks and shoals" into private ownership.

Other sections of the Virginia Code extend significant protections to the riparian's private oyster grounds. Section 28.1-118 provides that all leases of oyster grounds to non-riparians are subject to the riparians' rights to private oyster grounds. Section 62.1-3 provides that the Marine Resources Commission shall not issue any permits for the use of submerged lands which would encroach upon existing oyster ground leases. And Section 62.1-4 provides that no mineral lease or easement issued by the state shall justify interference with oyster grounds.

Finally, Section 28.1-110 incorporates by reference all of the sections dealing with oyster grounds and makes them equally applicable to grounds for clams. Hence, it appears that a riparian is also entitled to exclusive rights to a one-half acre clam ground.

4. Hunting

Section 29-85 of the Code of Virginia gives riparian owners, or their licensees, the exclusive privilege annually to construct a duck blind in the public waters in front of their land. In Avery v. Beal,[92] the statute was constitutionally attacked as violative of due process, but the Virginia Court of Appeals found the statutory classification a reasonable exercise of the state's police power designed to conserve water fowl and to protect hunters.

D. Nuisance

The law of nuisance is an enforcement arm of the real property system. As such, it designates the courts as an arbiter empowered to apply sanctions where they find that a person is using his own property in a fashion that injures another. Both governmental officials and private land owners are given standing to seek relief, and the sanctions that may be imposed are either damages, injunction, or both.

When a governmental official seeks relief, nuisance acts as the common law base of the state's regulatory powers. This concept will be discussed in Chapter Three. But when a private land owner seeks relief, nuisance serves as a mechanism for allocating resources among private individuals. This use of the law of nuisance is discussed in this section. Since the courts of Maryland and Virginia have developed the nuisance doctrine along similar lines, the law of both jurisdictions will be discussed together.

1. Nuisance and Riparian Rights

In the allocation of Chesapeake Bay resources, the concept of nuisance intimately relates with the rights of riparian land owners. Status as a riparian land owner creates rights, and the doctrine of nuisances affords a remedy against their infringement. This interplay has occurred with reference to a variety of riparian rights. In Harrison v. Sterett[93] the Provincial Court of Maryland recognized nuisance as an appropriate remedy where the plaintiff proved that the defendant by constructing a wharf was depriving him of reasonable access to the waters. In Garitee v. Baltimore[94] the court recognized nuisance as an appropriate remedy where the plaintiff proved that the defendant by depositing silt in front of the plaintiff's property was obstructing plaintiff's use of navigable waters. The vast majority of nuisance cases in Maryland and

Virginia, however, have dealt with efforts by riparian land owners to abate pollution in adjacent waters.

2. Private Remedy for Pollution

The right to water in an "ordinary state of purity," is one of the most basic rights that the courts have afforded riparians.[95] If it were taken literally, however, the waters of the Bay would be pristine but almost useless. The root of riparianism is equality of treatment for all abutting land owners. Almost any use of the Bay's waters has some effect on water quality. Hence, if any land owner should attempt to use the Bay, his neighbors could bring suit and abate the nuisance which interfered with their right to "ordinary" water quality.

The courts, of course, have not permitted this to happen. The question is then raised, when do courts find alteration of water quality a nuisance? There is no clear answer. The visibility of judicial decision-making in nuisance cases is low. The decision as to whether or not particular conduct constitutes a nuisance is initially made by trial courts, which do not publish reports. Since trial court decisions in nuisance cases are seldom reversed, appeals are seldom taken to the courts which do publish official records. From the few cases that are appealed, however, certain doctrinal guidelines can be extrapolated.

At the outset there is a problem of definition. What sort of discharge interferes with "ordinary" water quality? Today it is recognized that waste discharges can effect the bacteria level, the dissolved oxygen level, the acidity, the nutrient level and the temperature of waters. Excess bacteria, acidity, temperature and nutrients and too little dissolved oxygen can all be said to result in pollution. Most of the cases in which courts have found that nuisance conditions exist, have dealt with discharges of human or animal wastes which increase the bacteria level of adjacent waters.

This is not to suggest, however, that all cases where the defendant is found to have engaged in activities which significantly increase the bacteria level of adjacent waters have found a nuisance. For example, in Helfrich v. Catonsville Water Co.,[96] the lower riparian sued an upper riparian whose cows were befouling a stream. The court ruled that notwithstanding this pollution, the upper riparian had not created a nuisance since he was merely making "reasonable" use of his property.

The courts have developed other techniques to insulate polluters from privately imposed sanctions. The law abounds with classifications which confuse rather than clarify. The distinction between "public" and "private" nuisance is a good example. The doctrine of a public nuisance is in reality a defense afforded to polluters. When a plaintiff brings a nuisance suit, the defendant almost invariably defends by saying that even if his conduct constitutes a nuisance, it is a public rather than private nuisance.[97] If the defendant is successful in convincing the court that his conduct constitutes a public nuisance——conduct which inconveniences the whole community——then the plaintiff is permitted to recover only if he has suffered some special and peculiar damage, which is not experienced in common with other citizens.[98] The unstated premise of the defense of public nuisance, apparently, is that if the conduct injures the whole community and has the passive acceptance of public officials who have not brought suit to enjoin it, then the effluent must be contributing to community affluence and a private individual who has suffered no particular damage should not be allowed to abate it.

The courts also have developed several special techniques for insulating public polluters from privately imposed sanctions. The courts have evinced an understandable reluctance to enjoin municipalities from operation of sewage disposal plants. For example, in Livezey v. Town of Bel Air,[99] the court found that, even if the plaintiff proved that the city's sewage disposal activities were polluting a stream, he should be denied injunctive relief and limited to money damages, except on a showing of irreparable injury to property rights. The court further held that if granting an injunction would endanger public health, it should not be issued until after the municipality is given an opportunity to adopt an alternative system. Moreover, courts in both Maryland and Virginia have recognized that the state may authorize municipalities to pollute tidewaters through the discharge of sewage, and that this authorization may serve as a defense in a nuisance action.[100] These cases proceed on the theory that since the state owns the tidewater, it may grant rights therein as it deems proper.

It should be noted, however, that when a governmental unit is the polluter, another legal concept becomes intertwined with the doctrine of nuisance. If the public polluter significantly reduces the value of land held by a private party, regardless of whether or not there is a defense to the nuisance action, the public body may be required to pay just compensation for the taking of property under the due process clause of the federal and state constitutions.[101]

The foregoing synthesis of Maryland and Virginia nuisance cases should not be taken too literally. It brings consistency out of a body of cases that are essentially inconsistent. It serves more as an index of what the courts have said than as a reflection of the realities of what they have done. In fact, the courts appear to have indulged in a sort of unarticulated "benefit-cost" analysis. They have measured the benefit to the public from an activity (e.g., employment furnished, contribution to tax base, need for sewage disposal) against the cost (e.g., reduction in property values, destruction of shellfish beds, health hazards, etc.). Only if costs exceed benefits have the courts taken effective steps to curtail the activities involved.

The pressures which have led the courts to "benefit-cost" analysis are obvious. Almost all of the litigation concerns the same sort of conflict. The defendant polluter is a business disposing of waste from a factory or other industry, or a unit of local government disposing of sewage. The plaintiff is a private land owner. If the defendant is a private business, it may have a substantial investment in its slaughter-house, chicken rendering plant or paper plant. It may be making significant contributions to the economic base of the community through employment of local people and payment of property taxes. If the defendant is a local governmental unit, without adequate sewage treatment works, there may be no short-run choice other than to permit it to pour raw sewage into adjacent waters.

A variety of cases can be used to illustrate this analysis. Perhaps the most graphic is Baltimore v. Warren Mfg. Co.[102] There the plaintiff brought suit to enjoin the defendant from polluting a river, the alleged pollution resulting from two sources—hog pens and a factory. The court enjoined the use of the hog pens, a marginal economic use, but permitted the factory, a viable economic use, to continue operation. In both Cityco Realty v. Annapolis[103] and Darling v. Newport News[104] the court denied private land owners relief against municipalities which were using adjacent waters for sewage disposal, while in both Block v. Baltimore[105] and Garitee v. Baltimore[106] the court granted relief against disposal of garbage or dredging spoil near to the plaintiff's lands. One way of reconciling these cases is to say that, while Baltimore could be forced to otherwise dispose of garbage or spoil without significant economic dislocation, Annapolis and Newport News had no immediate alternati

to pouring municipal wastes into abutting waters.

Although the courts appear to have used this balance-of-interests technique since the inception of the nuisance doctrine, their valuation of variables has by no means been static. During the industrial revolution courts kept their hands off of industry, but for the last thirty years they have indicated a willingness to make industry adapt to the need for higher environmental quality.[107] Moreover, in a recent suit under the Federal Water Quality Act, a Federal District Court was willing to attack directly the problem of pollution from municipal waste disposal by ordering the City of St. Joseph's Missouri, to float bonds and construct an adequate sewage treatment plant.[108]

The private remedies which the doctrine of nuisance provides are obviously not sufficient to keep Chesapeake Bay water pollution within tolerable bounds. The private claimant must overcome numerous problems of proof, and doctrinal obstacles. The adversary proceeding in which such remedies are sought does not assure representation of the public's interest in clean water. But the doctrine of nuisance itself has served as a base for the development of public water quality controls. This development will be discussed in Chapter Three.

E. Private Rights in Animals Ferae Naturae

During the English feudal period there was a continuing conflict between the Crown and the barons as to fishing rights. This conflict was mirrored in provisions of the Magna Carta and in a series of parliamentary enactments designed to preclude the King from making grants of private fisheries.[109] Writing after the fact, Blackstone rationalized these developments in broad doctrinal terms. With an ear for Latin and an eye towards Roman Law, he viewed fish as animals "*ferae naturae*," property in which was vested in the King, subject to a right of "free fishery" which entitled his subjects to capture and thereby to acquire ownership thereof.[110]

United States common law is also replete with authority that the states own floating fish or shellfish, subject to public or common rights of fishery.[111] Unfortunately, though, the Supreme Court elaborated upon Blackstone's rationale. In *Illinois Central R. Co.* v. *Illinois*[112] the court indicated that the rights of the state can be divided into two categories—*jus publicum* and *jus privatum*. The *jus publicum* are those rights which are inherent incidents of sovereignty of the state, and which the legislature cannot surrender, destroy or impair. The *jus privatum* are those rights which the state has as a proprietor of property, and which the legislature can alienate or dispose of as it sees fit. The court also determined that the state holds tidewaters in a sort of metaphorical trust for the benefit of the people.[113]

From this ocean of abstraction has emerged a belief that the people of each state have, as individuals, a right of fishery which is sacrosanct from legislative infringement. This proposition can be explained by saying either that the common fishing rights are *jus publicum*, or that the state holds the fish and shellfish supported by tidewaters, in trust for the benefit of all of its citizens.

The same argument has been made in both Maryland and Virginia. In *Phipps v. Maryland*,[114] decided in 1864, a defendant was prosecuted for taking oysters from an oyster bed which had been granted to a private individual by the legislature. The defendant answered by saying that the creation of private oyster beds was in derogation of the common law right of public fishery. The Court of Appeals avoided this argument by deciding that the privilege which the legislature had granted did not extend to natural oyster beds, but merely provided individuals with a place for temporarily storing oysters they had taken from natural oyster beds, and that therefore the privilege subtracted nothing from the common right of fishery. The court then went on to leave open the following question:

> It is not necessary to decide, in this case the very important, and perhaps delicate question, as to the power of the Legislature to grant several or exclusive rights of fishery in navigable waters, and we forbear the expression of any opinion upon it.[115]

In 1932, however, the Virginia Supreme Court of Appeals addressed itself squarely to the problem. In Commonwealth v. Newport News[116] the Attorney General, acting under authority of the Governor and representing the people of the state, brought suit to enjoin the City of Newport News from dumping untreated sewage and thereby polluting oyster bottoms. The city had been authorized to make this use of the tidewater by the General Assembly, but the state contended the General Assembly did not have power to impair the common right of fishery.

The court persuasively debunked the notion that the people have a sort of natural right of fishery. It pointed out that the basic premise of state constitutional law is that the legislature, as representative of the people, has plenary powers except to the extent limited by provisions of the state or federal constitutions. This proposition must be qualified by a recognition that the legislature does not have power to abdicate or destroy the governmental powers of the state. The legislature does not have power to pass an enactment which forever extinguishes its police powers, not can it effectively abdicate its lawmaking powers. If these inherent incidents of the state's sovereignty are referred to as the jus publicum, then it is fair to say that the legislature cannot impair them. But the court felt that the right of fishery was not such an inseparable incident of sovereignty and that therefore the common right of fishery was subject to the disposal of the legislature.[117]

The court likewise gave short shrift to the notion that an implied trust in some fashion limits the legislature's powers. Pointing out that "[t]he statement that . . . the state Legislature holds its tidal waters and their bottoms upon a trust establishes nothing that remained to be established before the statement was made,"[118] the court went on to find that any limitations on legislative powers must be found, express or implied, in the state or federal constitutions.

Working within the constitutional paradigm outlined in the Newport News case, the legislatures of Maryland and Virginia have allocated and regulated tidewater fishing rights in a variety of ways. With reference to fin fish, the basic allocation decision has been to limit the right to fish with nets to state residents.[119] Maryland has gone several steps further, limiting such fishing to within the jurisdictional limits of the county in which the resident lives,[120] and giving certain riparian owners a preference in the placing of stationary fish traps.[121] Superimposed upon these provisions are a wide variety of detailed regulatory provisions.[122]

Most of the legislation dealing with shellfish relates to oysters. Here again both Maryland and Virginia have limited the taking of oysters to their respective residents.[123] In Maryland by statute,[124] and in Virginia by virtue of a state constitutional provision,[125] all natural oyster beds are held as commons and cannot be leased to private parties. In Maryland this provision is supplemented by procedures whereby licenses must be obtained to dredge for oysters in the main arm of Chesapeake Bay,[126] or in various specified counties.[127] County licenses are available only to county residents. A procedure is also provided whereby individuals can acquire private leases to areas other than natural oyster beds.[128] The Virginia statutes call for a method whereby riparians and other state residents can acquire private leases in areas other than natural oyster beds.[129] In addition, both states have passed a number of detailed regulatory provisions designed to prevent undue depletion of the oyster supply, and other laws relating to the taking of clams and other bivalves.[130] The Potomac River Compact of 1958 establishes the estuarine portion of the Potomac River as a common to be enjoyed equally by the citizens of Maryland and Virginia and to this extent takes precedence over the above provisions.[131]

Two significant legal problems emerge from this morass of legislation. The first, the question of whether the states can constitutionally limit use of fishery resources to state citizens, under the Privileges and Immunities Clause of the United States Constitution, has already been discussed.[132] The second relates to the power of the state legislatures to change from a basically public oyster fishery to a private oyster fishery. Virginia already has leased private grounds which are relatively productive but does not have much suitable bottom available outside of the natural oyster beds.[133] Maryland has much more suitable bottom available, but has only a few thousand acres under private leases,[134] and these are used almost exclusively as a storage area for oysters taken from public grounds rather than for actual production. It has been persuasively argued that if the total economic yield of the oyster industry is to be increased, it is necessary to grant more private rights in the bottom so as to attract capital and innovation.[135] This might entail either the more liberal leasing of non-productive bottoms or the leasing of natural beds (now held as commons) into private hands.

In Virginia a constitutional amendment would be required to permit the private leasing of natural beds. In Maryland there is no explicit constitutional obstacle but there is the problem of whether the legislature has power to derogate the common right of fishery, which was raised but left unanswered in Phipps v. Maryland.[136] It is submitted that should this question arise, the Maryland Court of Appeals should adopt the seemingly correct reasoning of the Virginia Court of Appeals in Commonwealth v. Newport News[137] and permit this exercise of legislative discretion.

F. Conclusions

Although the Chesapeake Bay is nominally said to be owned by the States of Maryland and Virginia, private uses of Bay resources have been explained as exercises of private rights. Some private rights are said to have devolved upon private individuals as incidents of ownership of submerged land. These are justified by reference to some formal conveyance through which the state transferred its rights into private hands. Most private rights are said to be incident to ownership of land abutting the Bay waters. These are justified either as judicially evolved, or legislatively enacted, riparian rights, and may be effectively delimited by the lack of an effective nuisance remedy to enforce them. Finally, the private right to common fishery may be said to be a natural right. This is justified by reference to the verbal abstractions of archaic rhetoric.

* Notes *

II. THE PRIVATE DOMAIN

1. *See* A. EMBREY, WATERS OF THE STATE 57-127 (1931) (prepared for the Virginia Commission on Conservation and Development, published by Old Dominion Press, Inc.); C. GOULD, THE LAND SYSTEM IN MARYLAND, 1720-1765, *passim* (Johns Hopkins U. Studies in Historical and Political Science, Series 31, No. 1, 1913).
2. *See, e.g.*, the disputed land grant in Browne v. Kennedy, 5 H & J 195 (1821) and the discussion in Miller v. Commonwealth, 159 Va. 924, 166 S.E. 557, 559 (1932).
3. 41 U.S. (16 Pet.) 367 (1842).
4. *Id.* at 411-18.
5. A. EMBREY, *supra* note 1 at 131-36.
6. *Id.* at 135-36.
7. *See* J. ANGELL, TIDE WATERS 25-26 and footnote 3 (1847).
8. 28 U.S.C. § 1652 (1954) provides:

   > The Laws of the several states, except where the Constitution or treaties of the United States or Acts of Congress otherwise require or provide, shall be regarded as rules of decision in civil actions in the courts of the United States, in cases where they apply.

   In Hawkins v. Barney's Lessee, 30 U.S. (5 Pet.) 457, 464, it was said that the predecessor of this section "has been held to be no more than a declaration of what the law would be without it: to wit, that the *lex loci* must be the governing rule of private right, under whatever jurisdiction private right comes to be examined". *Cf.* Erie R.R. v. Tompkins, 304 U.S. 64 (1938).
9. 5 H & J 195 (1821).

10. *Cf*. Baltimore v. Canton Co., 186 Md. 618, 47 A.2d 775 (1946).

11. MD. CONST., *Declaration of Rights* art. 5.

12. 8 Va. (4 Call.) 441 (1798).

13. 9 Va. (5 Call.) 444 (1805).

14. 9 VA. CODE ANN. § 62.1-1 (1950).

15. *Cf*. Baltimore v. Canton Co., 186 Md. 618, 47 A.2d 775 (1945); *cf*. Commonwealth v. Newport News, 158 Va. 521, 164 S.E. 689 (1932).

16. *See* C. GOULD, *supra* note 1 *passim*. Over the years the Land Office has gone through a number of transformations and it is today part of the Hall of Records and the Archivist of the Hall of Records is designated as its commissioner. MD. ANN. CODE art. 54, §§ 12-53 (1957).

17. MD. ANN. CODE art. 54, § 48 (1957).

18. MD. ANN. CODE art. 78A, § 15 (1957).

19. MD. ANN. CODE art. 27, § 485 (1957).

20. MD. ANN. CODE art. 66C, § 708 (1957).

21. VA. CONST. § 175.

22. Act of February 16, 1819 (Rev. Va. Code 1819 ch. 87).

23. *See* the discussion in Miller v. Commonwealth, 159 Va. 924, 166 S.E. 557, 561-67 (1932).

24. VA. CODE ANN. § 62.1-2 (1950).

25. Act of December 17, 1792, § 6 (1 Stat. at Large (N.S.) 1792-1795, p. 65). Today this prohibition may be found in VA. CODE ANN. § 62-1 (1950).

26. VA. CODE ANN. § 62.1-4 (1950).

27. VA. CODE ANN. § 28.1-109 (1950).

28. *See* Morris v. United States, 174 U.S. 196 (1899).

29. Shively v. Bowlby, 152 U.S. 1, 48 (1894); *see also* Cherokee Nation or Tribe of Indians in Oklahoma v. Oklahoma, 402 F.2d 739 (10th Cir. 1968).

30. United States v. Holt State Bank, 270 U.S. 49, 55 (1926).

31. Shively v. Bowlby, 152 U.S. 1, 57 (1894).

32. C. GOULD, *supra* note 1 at 12-13.

33. *See* Tyler v. Wilkinson, 24 F. Cas. 472 (No. 14, 312) (1827); Mason v. Hill, 110 Eng. Rep. 692 (1833).

34. *See, e.g.*, Ridgely v. Johnson, 1 Bland 316, note f (Md. Ch. 1801) (Brantly's Notes); Baltimore & O. R.R. v. Chase, 43 Md. 23, 34-36 (1875); Taylor v. Commonwealth, 102 Va. 759, 47 S.E. 875 (1904).

35. Giraud's Lessee v. Hughes, 1 Gill & J. 249 (Md. 1829). *Cf.* Harrison v. Sterett, 4 H & McH. 540 (Md. 1774). Some courts have distinguished between accretions ("gradual and imperceptible accumulation of land by natural causes") and dereliction ("the gaining of land from the water, in consequence of the sea shrinking back below the usual water mark"). *See* BLACK'S LAW DICTIONARY 36, 530 (4th ed. 1951). Since no legal consequences appear to turn on this distinction, in this paper the term, accretions, is used generically to apply to all natural increases in fast land.

36. MD. LAWS ch. 9 (1745).

37. Dugan v. Baltimore, 5 Gill & J. 357-58 (Md. 1833).

38. MD. LAWS ch. 168 (1835).

39. MD. CODE art. 98, § 21 (1860).

40. These doubts were expressed in the preamble of remedial legislation prepared in 1862 as follows:

> WHEREAS, doubts are entertained in regard to the extent of the rights of proprietors of land bounding on navigable waters to accretion to said land, and to extend improvements into said waters; for the purpose of solving such doubts, therefore . . .

MD. LAWS ch. 129 (1862).

41. See, e.g., Wagner v. Baltimore, 210 Md. 615, 124 A.2d 815 (1956); Linthicum v. Shipley, 140 Md. 96, 116 A. 871 (1922); Melvin v. Schlessinger, 138 Md. 337, 113 A. 875 (1921); Day v. Day, 22 Md. 530 (1865).

42. 64 Md. 439, 2 A. 826 (1886).

43. 180 Md. 372, 25 A.2d 196 (1942).

44. 50 Op. Md. Att'y. Gen. 452, 458-71 (1965).

45. Id.

46. Id. at 471-72.

47. MD. LAWS ch. 9 (1745).

48. See MD. CODE art. 98, § 21 (1860).

49. Baltimore v. Canton Co., 186 Md. 618, 47 A.2d 775 (1946).

50. See, e.g., Baltimore & O. R.R. v. Chase, 43 Md. 23, 33-34 (1875).

51. See Baltimore v. Canton Co., 186 Md. 618, 47 A.2d 775 (1946) for a discussion of the evolution of Baltimore City's regulatory powers over construction in the harbor.

52. Cf. Hess v. Muir, 65 Md. 586, 598, 5 A. 540, 6 A. 673 (1886); Baltimore v. Canton Co., 186 Md. 618, 625-27, 47 A.2d 775 (1946).

53. Goodsell v. Lawson, 42 Md. 348 (1875).

54. Board of Natural Resources, Maryland Natural Resource Policies 3 (Annapolis July 1, 1968).

55. MAGNA CARTA § 33.

56. 33 U.S.C. 401, 403-04 (1958); MD. ANN. CODE art. 27, § 485 (1957); MD. ANN. CODE art. 66C, §§ 22-30 (1957); MD. ANN. CODE art. 96A, §§ 12-20 (1957); VA. CODE ANN. § 62.1-3 (1950). Both Maryland and Virginia have delegated powers to regulate construction and filling activities to various units of local government. The authority of these local units is discussed on pages 165-66 infra.

57. Culley v. Hollis, 180 Md. 372, 25 A.2d 196 (1942).

58. *Id*.

59. Hodson v. Nelson, 122 Md. 330, 89 A. 934 (1914); *but cf*. Spencer v. Patten, 84 Md. 414, 35 A. 1097 (1896).

60. 53 Md. 422 (1880).

61. King v. North Chesapeake Beach Land & Improvement Co., 143 Md. 693, 123 A. 455 (1923).

62. Dugan v. Baltimore, 5 Gill & J. 357-58 (Md. 1833).

63. MD. ANN. CODE art. 54, § 46 (1957).

64. Steinem v. Romney, 233 Md. 16, 194 A.2d 774 (1963).

65. *See* Baltimore v. Baltimore & Philadelphia Steamboat Co., 104 Md. 485, 65 A. 353 (1906).

66. 11 Gill & J. 351 (Md. 1840).

67. 43 Md. 23 (1875).

68. 104 Md. 485, 65 A. 353 (1906).

69. *Id*.

70. 33 F. Supp. 881, 887 (D. Md. 1940) (citations omitted).

71. Baltimore v. Crown Cork & Seal Co., 122 F.2d 385 (4th Cir. 1941).

72. *Id*. at 392.

73. 190 Md. 244, 58 A.2d 248 (1948).

74. 250 Md. 380, 243 A.2d 575 (1968).

75. King v. North Chesapeake Beach and Land Improvement Co., 143 Md. 693, 123 A. 455 (1923).

76. Potomac Dredging Co. v. Smoot, 108 Md. 54, 69 A. 507 (1908).

77. MD. LAWS ch. 362 (1888); see Bostick v. Smoot Sand and Gravel Corp., 154 F. Supp. 744, 751-52 (D. Md. 1957) rev'd. 260 F.2d 534 (4th Cir. 1958) for a historical review of these developments.

78. *See* Bostick v. Smoot Sand and Gravel Corp., 260 F.2d 534 (4th Cir. 1958) for the background of this 1957 statute.

79. *Id*.

80. 50 Op. Md. Att'y. Gen 452, 453 (1965).

81. *See* 5 *McGraw-Hill Encyl. of Science & Technology* 79.

82. 50 Op. Md. Att'y. Gen. 452, 457-58 (1965).

83. Taylor v. Commonwealth, 102 Va. 759, 773, 47 S.E. 875, 880 (1904); *accord* Thurston v. Portsmouth, 205 Va. 909, 140 S.E.2d 678 (1965).

84. *See* Miller v. Commonwealth, 159 Va. 924, 166 S.E. 557 (1932) for a historical survey of the development of this section.

85. *See, e.g.*, Grinels v. Daniel, 110 Va. 874, 67 S.E. 534 (1910).

86. *See* Groner v. Foster, 94 Va. 650, 27 S.E. 493 (1897).

87. 27 S.E. at 494.

88. *Id*.; *accord*, Cordovana v. Vipond, 198 Va. 353, 94 S.E.2d 295, 299 (1956).

89. *See* United States v. Smoot Sand & Gravel Corp., 248 F.2d 822, 826-27 (4th Cir. 1957).

90. 264 F. Supp. 399, 402 (E.D. Va. 1967).

91. The statutory authorization for such contracts is found in VA. CODE ANN. § 28.1-94.1 (1950).

92. 195 Va. 690, 80 S.E.2d 584 (1954).

93. 4 H & McH 540 (1774).

94. 53 Md. 422 (1880).

95. *See, e.g.*, Woodyear v. Schaefer, 57 Md. 1 (1881); Webster Co. v. Steelman, 172 Va. 342, 1 S.E.2d 305 (1939).

96. 74 Md. 269, 22 A. 72 (1891).

97. *See, e.g.*, Houck v. Wachter, 34 Md. 265 (1871); Payne v. Godwin, 147 Va. 1019, 133 S.E. 481 (1926).

98. Baltimore v. Marriott, 9 Md. 160, 178 (1856).

99. 174 Md. 568, 199 A. 838 (1938).

100. Cityco Realty Co. v. Annapolis, 159 Md. 148, 150 A. 273 (1930); Darling v. Newport News, 123 Va. 14, 96 S.E. 307 (1918), *affm'd*. 249 U.S. 540 (1919).

101. *See* Darling v. Newport News, 249 U.S. 540, 543 (1919); Taylor v. Baltimore, 130 Md. 133, 99 A. 900 (1917).

102. 59 Md. 96 (1882).

103. 159 Md. 148, 150 A. 273 (1930).

104. 123 Va. 14, 96 S.E. 307 (1918), *affm'd*. 249 U.S. 540 (1919).

105. 149 Md. 39, 129 A. 887 (1925).

106. 53 Md. 422 (1880).

107. *Compare* Baltimore v. Warren Mfg. Co., 59 Md. 96 (1882) *with* Bishop Processing Co. v. Davis, 213 Md. 465, 132 A.2d 445 (1957) *and* Webster Co. v. Steelman, 172 Va. 342, 1 S.E.2d 305 (1939).

108. United States v. St. Joseph, W.D. Mo., No. 1077 (Oct. 31, 1961).

109. *See* pp. 81-83, *supra*.

110. 2 BLACKSTONE COMMENTARIES 410-11 (1902).

111. McCready v. Virginia, 94 U.S. 391, 394 (1876); Smith v. Maryland 59 U.S. (18 How.) 71 (1855); Martin v. Lessee of Waddell, 41 U.S. (16 Pet.) 367 (1842); Browne v. Kennedy, 5 H & J 195 (1825).

112. 146 U.S. 387, 458 (1892).

113. *Id*. at 453-54.

114. 22 Md. 380 (1864).

115. *Id*. at 389-90.

116. 158 Va. 521, 164 S.E. 689 (1932).

117. 164 S.E. at 696-98.

118. *Id*. at 694 (emphasis added).

119. MD. ANN. CODE art. 66C, § 262 (1957); VA. CODE ANN. §§ 28.1-47, 28.1-57 (1950).

120. MD. ANN. CODE art. 66C, § 262 (1957).

121. MD. ANN. CODE art. 66C, § 25[illegible] (1957).

122. MD. ANN. CODE art. 66C, §§ 262-219B (1957); VA. CODE ANN. §§ 28.1-47 through 28.1-81 (1950).

123. MD. ANN. CODE art. 66C, § 698 (1957); VA. CODE ANN. § 28.1-122 (1950).

124. MD. ANN. CODE art. 66C, § 708(b) (1957).

125. VA. CONST. § 175; see also VA. CODE ANN. § 28.1-100 through 28.1-107 (1950).

126. MD. ANN. CODE art. 66C, § 702 (1957).

127. MD. ANN. CODE art. 66C, §§ 703, 703A (1957).

128. MD. ANN. CODE art. 66C, § 708 (1957).

129. VA. CODE ANN. §§ 28.1-108, 28.1-109 (1950).

130. See MD. ANN. CODE art. 66C, §§696-717 (1957); VA. CODE ANN. §§28.1-82 through 28.1-163 (1950).

131. MD. ANN. CODE art. 66C, § 261A (1957).

132. See pp. 87-88, supra.

133. J. McHUGH, FISHERIES OF CHESAPEAKE BAY, PROCEEDING OF GOVERNOR'S CONFERENCE ON CHESAPEAKE BAY, II - 152, II - 153 (Maryland 1968).

134. Id.

135. THE POTOMAC NEWSLETTER, vol. II, No. 12, 1-7 (December 30, 1968).

136. 22 Md. 380 (1864).

137. 158 Va. 521, 164 S.E. 689 (1932).

III.

PUBLIC REGULATION

In schematic terms government may be said to play two roles with reference to Chesapeake Bay resources. First, it is an owner of many Bay resources. In this role, government may actively participate in the use of resources for its own economic benefit. Chapter One outlined the historical bases for public ownership, and the allocation of ownership prerogatives among the units of government in the federal system. Chapter Two delimited the extent of public ownership by indicating the various private rights individuals have acquired in Bay resources. Second, government has power, by virtue of its sovereignty, to regulate the use of Bay resources. In this role, government makes rules as to how and when Bay resources are to be used and who is to use them. Chapter Two dealt with the relatively passive aspects of this role, with government developing and interpreting the land system so that it would be capable of resolving disputes between land holders. Chapter Three deals with the more active aspects of this role, with government mandating how resources are to be employed.

This categorization of government as both an owner and regulator should not be taken to mean that the two roles are either clearly distinguishable or mutually exclusive. Their overlap may be well illustrated by comparing several Supreme Court pronouncements. The court has suggested that the concept of public ownership is merely a "fiction", describing in "legal shorthand" the government's regulatory powers.[1] Conversely, as will be seen in this chapter, the court has created a property interest in the federal government (a "navigation servitude") that permits it, while regulating commerce, to in effect take private property without paying compensation.[2]

A. Regulatory Powers in the Federal System

The basic theorem of American constitutional law is that state governments have plenary powers while the United States Government has limited powers. The power of state legislatures is limited only by the state and federal constitutions. Their residuum of authority is referred to as the police power. Conversely, the United States Congress has only those powers granted to it by the United States Constitution. The power of the federal government most closely connected with Chesapeake Bay is the power to regulate commerce. Of lesser importance is the treaty-making power.

Cutting across the regulatory powers of state and federal governments are a variety of constitutional limitations. The Maryland, Virginia and United States Constitutions all provide (with only slight variations in language) that government shall not take private property without paying just compensation.[3] Since almost any regulation has some influence on property values, this raises the question—what quantum of "regulation" amounts to "taking"? It also raises the question as to which of the private rights discussed in Chapter Two constitute "property" and are therefore entitled to constitutional protection. In addition, the "due process" and "equal protection" clauses of the United States Constitution[4] have been interpreted to place various substantive and procedural limitations on the exercise of regulatory powers.

B. Regulatory Powers of the Federal Government

1. Commerce Power

Article One, Section Eight of the United States Constitution provides that Congress shall have power to "regulate commerce with foreign nations and among the several states . . . ." Over the years the Supreme Court has given this simple language such an expansive interpretation that today Congress has substantially unfettered control over the nation's waterways.

a. Navigability—In the case of Gibbons v. Ogden (1824), Chief Justice Marshall reasoned that "commerce" includes "transportation" which includes "navigation".[5] Navigability thereby became the constitutional touchstone of the federal government's commerce power. Under the English common law, a body of water was navigable if it was subject to the ebb and flow of the tides. In 1870 the Supreme Court held that, although this might be a sufficient definition for English purposes, it was not applicable in this country due to the existence of river systems which were clearly navigable, but in which there were no tidal flows.[6] This was the first formulation of the "navigable in fact test", which says that, for the purpose of determining whether a river is subject to the commerce power of the federal government, one need determine only whether it is, in fact, navigable.

Subsequently, in 1890, the Supreme Court held that if a river was navigable in fact in any part, then the entire length of the river was subject to the commerce power (as action taken on the non-navigable part could affect the navigable part).[7] The final extension of this concept of navigability was reached by the Supreme Court in determining the applicability of the Federal Power Act to a totally non-navigable river, which had never been navigable and, in fact, could not economically be made navigable. In this case the power company was contending that it did not have to comply with the federal regulations because the river it was going to dam was non-navigable. The Supreme Court disagreed, asserting that it was a concern of the federal government under the commerce clause to keep rivers available for future navigational use so that, if it was reasonably possible to make a river navigable by the use of dams and locks, then the river was subject to federal control under the commerce power.[8]

Under this decision, few bodies of water in the United States which are large enough to float a boat are not subject to the power of the federal government.

b. Constitutional Limitations—Implicit in the commerce power itself are few if any limitations on Congress's power over Chesapeake Bay. As the Supreme Court stated in United States v. Appalachian Power Co.:

> [I]t cannot properly be said that the constitutional power of the United States over its waters is limited to control for navigation. . . . That authority is as broad as the needs of commerce. . . . Flood protection, water shed development, recovery of the cost of improvements through utilization of power are likewise parts of commerce control.[9]

The potential breadth of the commerce power is well illustrated by the case of Arizona v. California.[10] The Supreme Court held that Congress when it passed the Boulder Canyon Project Act gave the Secretary of Interior power to allocate waters of the Colorado River among the claimant states without regard to the priorities laid down by state law.

The Fifth Amendment to the United States Constitution, however, imposes at least theoretical limitations on Congress's power over waterways. The Fifth Amendment provides that the federal government shall not take private property for a public use without payment of just compensation. In the interpretation of this provision (and the Fourteenth Amendment which places the same stricture on state action) the courts have distinguished between public "regulation" of property and public "taking" of property. The consequence attributed to this distinction is that government need not pay compensation if it merely regulates, but must pay compensation if it takes. The distinction is, of course, tenuous. The "crazy-quilt pattern of Supreme Court doctrine"[11] which attempts to make the categorization, considers, among other things, whether there is a physical invasion of the property, whether the prohibited use is noxious, and the economic magnitude of the loss suffered.[12]

The unique feature of the navigation power is that it does not always abide by even these fuzzy rules—on occasion, private property may be "taken" by the federal government in the exercise of its commerce power, without payment of compensation. The United States Supreme Court has rationalized away the Fifth Amendment problem through the creation of a "navigation servitude" in the federal government. If, for example, the federal government wishes to require the removal of a private wharf as a waterway obstruction, or to dredge a ship channel through a privately owned oyster bed, it is said not to be taking property but to be asserting its property rights afforded by the navigation servitude.[13] The private owner is said to have no complaint since he acquired his property on notice of the government's superior claim.[14]

The Supreme Court has used the navigation servitude in a variety of contexts. In Greenleaf Lumber Co. v. Garrison,[15] the Secretary of War sought an injunction to demolish the company's wharf. The wharf had been built in complete accord with all of the regulations which existed at the time of construction, and was well within the bulkhead line established by the Corps of Engineers. Subsequently, the bulkhead line was redrawn, so that part of the wharf was outside it, and it was this that the Secretary sought to have destroyed. The Secretary based his argument on the power of Congress to regulate navigable waters, and the Act of Congress which delegated the power to improve and preserve the navigable waters of the United States to the Secretary of War. The company claimed that since it had built the wharf in accordance with all of the regulations in existence at the time, it had a vested right that could only be destroyed by a taking and payment of compensation.

The Supreme Court made short shrift of the company's contention. It held that one cannot get a vested interest in a waterway obstruction under any circumstances, as the federal government has a "navigation easement" over the water on behalf of the people, and any structures built in navigable water are built subject to this navigation easement or servitude. Thus, it held that the company was not entitled to any compensation.

Willink v. United States[16] also concerned a tidewater structure. The plaintiff had built a marine railway and wharf inside the existing bulkhead line. Subsequently the Corps of Engineers relocated the bulkhead line so that not only were the railway and wharf outside of it, but also some of his fast land was outside. The plans made when the line was so relocated were that the government was going to dredge away the land to relocate and deepen the channel. For over twenty years after the relocation of the line, the plaintiff continued to operate his business and the government made no efforts to put its plans into effect. Finally, the railway and wharf reached the point where they had to be rebuilt in order for the plaintiff to continue in business. As soon as he started to rebuild the facilities, however, the District Engineer ordered him to stop the construction, as he was placing obstructions inside the harbor lines drawn on the map. As a result, his facilities degenerated to the point where he could handle only very small boats, and he lost a great deal of income. Several years after this, the bulkhead line was again relocated, back to its original position, and the plaintiff sued in the courts for the loss of income occasioned by the stop-work order of the District Engineer which had resulted in the deterioration of the facilities.

The Supreme Court held that the plaintiff was not entitled to any compensation as the action of the District Engineer was not violative of his rights—he could not have any rights against the right of the public to use this area for navigation purposes. Thus, the plaintiff was not entitled to recover anything from the government.

It also has been held by the Supreme Court that the government can relocate a channel in a river in such a way that it completely blocks the natural channel, and neither the states nor private parties affected by this can do anything. In the case of South Carolina v. Georgia[17] the two states had entered into a compact which settled their boundary locations and pledged both of them to keep a certain channel in the river open. This compact antedated the adoption of the Constitution, and therefore did not need congressional approval. Almost a century after the compact, the federal government came in and dredged a new channel in the river, at the same time closing off the old channel. The Supreme Court held that this action of the federal government was valid, that the compact between the states on this point was thus abrogated, and that neither of the states could institute suit to require the other to live up to the compact in this connection.

In the same way, the federal government can cut a riparian land owner off from the water. In United States v. Commodore Park, Inc.[18] the federal government was sued by a riparian land owner who demanded compensation for the loss of his access to navigable water. The government was dredging a new channel in the harbor, and deposited the dredged material across the mouth of the cove on which the plaintiff's land was located, creating new fast land attached to a naval base. Only a small conduit was left connecting the cove with the main harbor, which, besides cutting the plaintiff's land off from the harbor, also turned the cove into a stagnant pool which received no cleaning action from the tides——so that it greatly decreased the value of the plaintiff's land. The Supreme Court held that the government's power under the commerce clause was such that no compensation had to be paid.

Yet another case held that action of the federal government which completely destroyed the value of the plaintiff's land was non-compensible.[19] The plaintiff was in the business of growing and harvesting oysters on leased lands at the bottom of Jamacia Bay. The government dredged a channel for ships through the middle of the plaintiff's beds, thus rendering them unfit for oyster cultivation or any other purpose. The Supreme Court held that even though the lessor of the lands was the absolute owner of them, and the plaintiff, as lessee, had all of the lessor's rights, these submerged lands were subject to the dominant navigation servitude of the federal government, and the decision of the government to exercise its rights did not require the plaintiff to be compensated for the loss of its business.

The exact bounds of this navigation easement have never been completely defined, but it is certain that everything below the high water mark and between the banks of the watercourse is subject to the servitude. This was decided by the Supreme Court in the case of United States v. Chicago, M., St. P., & P. Ry.[20] The railroad's tracks ran through the upper Mississippi flood plain, and were protected from the occasional floods of the river by a dike, erected and maintained by the railraod. The government built a dam which backed the water up to the point where the railroad had to increase the height of its dike, and the railroad sought compensation for the work it had to do. The court held that, since the tracks were within the banks of the river and that a dike was normally needed to protect them, and since these facts indicated that they were below high-water mark, then the navigation servitude was applicable, and the government did not have to reimburse the road for the cost of increasing the height of the protective works.

As far as water rights themselves are concerned, it is clear from the decisions that no right to the continued flow of water, or to the continued use of water can be asserted against the federal government and, therefore, no compensation need be paid for such rights. In an early case the government was condemning land for the "Soo" canal. On the land to be taken there was a power plant that had used the natural river course as its source of power. The Supreme Court held that the fact that the land was given added value by the existence of the flowing water was not to be considered in calculating the amount to be paid for the land.[21] In subsequent cases this principle has been expanded to cover the situation where land located along a waterway is suitable only for dam site use. The court has held that the suitability of the land for this purpose is not a factor in the calculation of compensation.[22] In the same way, the court has held that the destruction of the power head of an existing dam which results when the government builds another dam downstream is non-compensible.[23]

It has also been held, however, that a flowage easement, procured by a power company as part of its plans to build a dam, is a property right for which compensation must be paid. A flowage right is the grant of the right to flood fast land, and is truly an easement. Compensation for the condemnation of such a right, the Supreme Court has held, is equal to the difference between the value of the land without the easement and the value of the land with the easement or, as it has been also expressed, it is the amount of value the land loses due to the probability of the land being flooded.[24]

c. Pre-emption—The commerce clause not only makes an affirmative grant of power to the federal government, but it also is the most important limitation the Constitution imposes on state power. Within its sphere of constitutional authority the powers of the United States Government are paramount. This raises the question of the extent to which the congressional power over navigable waters precludes state regulation. In legal jargon this phenomenon is called pre-emption. Mr. Chief Justice Stone made the following attempt at a synthesis of the principles applied by the Supreme Court in determining when pre-emption occurs:

> Although the commerce clause conferred on the national government power to regulate commerce, its possession of the power does not exclude all state power of regulation. Ever since Willson v. Black-Bird Creek Marsh Co., 2 Pet. 245 and Cooley v. Board of Wardens, 12 How. 299, it has been recognized that in the absence of conflicting legislation by Congress, there is a residuum of power in the state to make laws governing matters of local concern which nevertheless in some measure affect interstate commerce or even, to some

> extent, regulate it. Thus the states may regulate matters which, because of their number and diversity, may never be adequately dealt with by Congress. When the regulation of matters of local concern is local in character and effect, and its impact on the national commerce does not seriously interfere with its operation, and the consequent incentive to deal with them nationally is slight, such regulation has been generally held to be within state authority.[25]

But Stone also recognized the inadequacy of these principles in explaining the cases. He went on to say:

> In the applications of these principles some enactments may be found to be plainly within and others plainly without state power. But between these extremes lies the infinite variety of cases, in which regulation of local matters may also operate as regulation of commerce, in which reconciliation of the conflicting claims of state and national power is to be attained only by some appraisal and accommodation of the competing demands of the state and national interests involved.[26]

In the actual reconciliation of the conflicting claims of state and national interest, the Supreme Court has upheld state legislation which authorized a dam across a navigable creek;[27] provided for the licensing of pilots;[28] required inspection of tugboats;[29] required abatement of smoke from vessels operating in interstate commerce;[30] authorized the construction of piers in navigable waters;[31] precluded the shipment beyond its borders of game taken within the state;[32] precluded the transportation beyond state borders of water from its streams;[33] and regulated the methods of taking oysters.[34] It has struck down state legislation which excluded federally licensed vessels from the state waters;[35] required ship owners using waters of the state to pay fees and file ownership statements;[36] granted an exclusive license for an interstate ferry;[37] permitted shipment of shrimp only if heads and hulls have been removed;[38] and required shrimp fishermen using coastal waters to dock and pack their catch in a state port.[39]

2. Treaty-Making Power

Article II, Section 2 of the United States Constitution gives the President power "to make Treaties, provided two thirds of the Senators present concur. . . ." The United States is presently party to treaties with Great Britain[40] and Mexico[41] which protect migratory birds. Congress has passed legislation implementing these treaties which prohibits hunting of migratory birds except as permitted by regulations promulgated by the Secretary of the Interior.[42] The Secretary is given substantially unfettered discretion in the making of regulations.

Several legal problems emerge from this relatively simple structure. The first relates to the power of the federal government to enter into such treaties. Some historical background is necessary to appreciate the problem. In 1913 Congress passed legislation giving the Secretary of Agriculture power to enact regulations protecting migratory birds. In that era of a more restrictive construction of the commerce clause two lower federal courts found the legislation unconstitutional since it was neither expressedly or impliedly authorized by the Constitution.[43] They therefore held that the power to regulate migratory birds was reserved to the states under the Tenth Amendment. The federal government was not to be stymied, however. The President promptly negotiated a treaty with Great Britain which was approved by the Senate. Congress passed legislation giving the Secretary substantially the same powers he had been given in the prior unconstitutional legislation, to implement the treaty.

This ploy was challenged in Missouri v. Holland.[44] Mr. Justice Holmes, speaking for the Supreme Court, upheld the legislation, finding that the treaty-making power of the United States is not limited by "some invisible radiation from the general terms of the Tenth Amendment."[45] The broad scope given the treaty power by this decision has been reaffirmed many times and it appears settled that there are no constitutional limitations on the subject matter of proposed treaties regulating the taking of migratory birds and fish.[46]

With today's expansive construction of the commerce clause, the use of a treaty as a device to enhance Congress's limited powers appears to have little utility. For example, the Supreme Court would undoubtedly give constitutional approval to almost any congressional migratory bird legislation under today's interpretation of the commerce clause. But the question remains whether a treaty may be used to avoid the express constitutional restraints on federal power found in the Fifth Amendment. In Missouri v. Holland Mr. Justice Holmes was careful to point out that the treaty itself did not "contravene any prohibitory words to be found in the Constitution."[47] The cases which have come up in the lower federal courts have all dealt with the validity of regulations promulgated in the implementation of the migratory bird treaties. Hunters have argued that these regulations deprive them of property rights in migratory birds without due process.[48] Land owners have argued that these regulations render their hunting grounds worthless.[49] The courts have uniformily assumed that Fifth Amendment restrictions apply but have then gone on to find that the regulations did not constitute a taking of property without just compensation. The question of whether the provisions found in the treaty itself are subject to Fifth Amendment limitations has never been raised.[50]

C. Regulatory Powers of Maryland and Virginia

1. Police Power

The police power is the power "to govern men and things" which inheres in the states as an attribute of sovereignty.[51] It is limited only by the provisions of state and federal constitutions. By far the most significant limitations on this residual state power have evolved from the Fourteenth Amendment to the United States Constitution. The relevant portions of this amendment provide that a state shall not "deprive any person of life, liberty or property, without due process of law; nor deny any person within its jurisdiction the equal protection of the laws." From this general language it is possible to permute almost an infinite variety of restraints on state regulatory activities. For purposes of division these potential restraints will be discussed in three categories—procedural due process, substantive due process and equal protection.

a. Procedural Due Process—Notice and a reasonable opportunity to be heard are generally recognized as the two fundamental requisites of a fair system of procedure. Taking account of practicabilities, however, the Supreme Court has held that legislative bodies need not afford notice and hearings to all persons affected by specific legislation.[52] But today the bulk of regulatory power has been delegated by state legislatures to administrative agencies. This raises the question of the extent to which the Fourteenth Amendment requires notice and hearing in administrative proceedings.

The Supreme Court has decided that when an administrative agency engages in a legislative function, promulgating rules of general application, it need not afford a hearing. Conversely when an administrative agency promulgates rules affecting the property or rights of a limited number of people, a notice and hearing may be constitutionally mandated.[53] In some instances this distinction is easy to draw, and is reflected in Maryland and Virginia statutes delegating authority to water agencies. For example, the Maryland Department of Water Resources is required to afford notice and a public hearing before granting an individual a permit to construct a water obstruction,[54] but the Department's power to promulgate water quality standards for state waters is not hedged by similar restrictions.[55]

In many instances the distinction is difficult to make and the Supreme Court cases tend to reconcile. One commentator has explained them by observing that the judicial inclination to require the protection of notice and hearing increases in direct proportion to the extent of the affected individual's pecuniary stake.[56]

b. Substantive Due Process—In the 1920's and '30's the Supreme Court significantly narrowed the scope of the state's police power by reading new substance into the Fourteenth Amendment. Adopting then fashionable laissez-faire economics the court struck down as unconstitutional various state efforts to regulate business. For example, during this period the court found unconstitutionally "unreasonable" state laws which regulated the size of loaves of bread,[57] precluded the use of certain materials in mattresses,[58] established a minimum wage for women[59] and required a showing of public necessity to obtain a license to engage in the ice business.[60]

In 1937, however, the court, under pressures from President Roosevelt's effort to "pack the court", abdicated its role as an economic czar. As Mr. Justice Douglas said:

> The day is gone when this Court uses the Due Process Clause of the Fourteenth Amendment to strike down state laws, regulatory of business and industrial conditions because they may be unwise, improvident or out of harmony with a particular school of thought.[61]

There is, however, still some substance to the due process clause. If state regulatory activity has an adverse effect on the value of real property, the activity may be unconstitutional under the Fourteenth Amendment or the analogous provisions of the Maryland and Virginia Constitutions. The verbalization of the due process concept is simple. The state may "regulate" the use of private property under the police power, but the state may not "take" private property without paying just compensation. The economic effect of the due process concept is also simple. When the state embarks on an activity which will have an adverse influence on the value of privately owned property, it may proceed either under its police power or its power of eminent domain. If the state is permitted to pursue the activity under its police power, the cost attributable to the reduction in the property's value is allocated to the private owner. If, however, the due process concept requires the state to use its power of eminent domain, this cost is allocated to the state.

Although the legal and economic consequences which follow from a determination that the government is either "taking" or "regulating" are clear, the determination of what actually constitutes a "taking" and what is mere "regulation" is less than clear. Several leeways serve to confuse the issue. First, there is the necessary tenuity of any distinction between governmental activities which have the same economic consequence——the reduction of the value of property. Second, since government can create "rights" other than property which are not entitled to due process protections, there is the problem of what constitutes "property". Adding to the confusion is the fact that the constitutions of both Maryland and Virginia have due process provisions.[62] Hence, while the Fourteenth Amendment establishes a floor on when compensation is required, Maryland and Virginia may apply more stringent compensation requirements if they choose.

(1) What Constitutes a Taking

If Maryland or Virginia dispossesses an individual from his land, and builds a road or a state office building on it, this clearly is a taking of property. In Virginia the problem is somewhat complicated by the language of the due process clause which, unlike the provisions in the United States and Maryland Constitutions, provides that compensation must be paid if private property is "taken or damaged".[63] While the "or damaged" clause is obviously designed to broaden the ambit of due process protection, the Virginia cases are less than clear as to what constitutes compensible damage.[64]

Generally, though, the more difficult problem arises when the states, through legislation or the order of an administrative agency, place restrictions on the manner in which the individual may use his property. When do restrictions on land use result in a taking?

The most common public restrictions on land use are imposed by zoning ordinances. In simple terms zoning is accomplished by the creation of a public authority with power to designate the types of use that can be made of land in various subdivisions of a given area. One zone might be for houses only, one for apartments and one for industry.

The various states began to pass zoning ordinances in the mid-1920's. Not surprisingly, since these ordinances had a very direct effect on land values, they were attacked on the constitutional ground that they took property without payment of just compensation. In Village of Euclid v. Ambler Realty Co.,[65] decided in 1926, the United States Supreme Court upheld the validity of zoning under the Fourteenth Amendment. Immediately after Euclid, zoning passed constitutional muster in Virginia.[66] After some initial hesitation, the Maryland Court of Appeals also approved the constitutionality of zoning.[67] The rationale in all of these cases was essentially the same: zoning is a reasonable exercise of police power and therefore does not constitute a taking of property.

Although zoning has received clear constitutional approval, specific exercises of the zoning power may still be attacked as denials of due process. When these attacks occur, the state's position is aided by a presumption of validity which places the burden of proof on the party attacking the constitutionality. In recent cases the Maryland Court of Appeals has said that the party attacking the application of the zoning ordinance must show that the regulation " . . . precludes the property's use for any purpose to which it is reasonably adapted"[68] and that it is not enough to show that "the property would be more valuable . . .

if free of the restriction."[69] The Virginia law is much the same notwithstanding the difference in language of the Virginia Constitution's due process provision. The Virginia court has held that the damage intended to be compensible under this provision is not damage which is incidental to an exercise of the police power.[70]

While these cases seem to indicate that due process limitations on exercises of zoning powers are nominal, on occasion courts still find that zoning amounts to a taking of property. A recent Connecticut case is a good example. In this situation a zoning ordinance restricted use of the town's flood plain (which was periodically flooded by the tidal estuary), exclusively for open space uses such as parks, wildlife sanctuaries, and landings. The court held that since this restriction precluded any profitable use of the land, it was a confiscatory taking of the land.[71]

By way of comparison it is also interesting to note that several western states have placed various direct and detailed restraints on the use of oil and natural gas. The constitutional issue arises because at common law the owner of property was considered to own not only the surface but minerals and resources under the ground as well.

By way of example, Wyoming has enacted a "waste control" statute limiting the uses which may be made of natural gas. The statute makes it unlawful to burn natural gas in an industrial process which does not take advantage of the heat produced. This statute was attacked as an unconstitutional taking of property by a manufacturer of carbon black. The United States Supreme Court upheld the constitutionality of the statute notwithstanding the fact that it rendered the claimants' existing factory and equipment useless.[72]

Oklahoma has also developed an interesting method of conserving gas and oil. A statute gives an administrative agency plenary power over the placement of wells and the rate of withdrawal.[73] The unique feature of the statute, however, relates to its method of apportioning oil and gas rights among land owners. The oil and gas fields are divided into units with all persons who own land within the units sharing profits and costs pro rata according to the amount of land they own. An owner who refuses to contribute his share of costs loses his share of profits. This method permits a limitation on the number of wells along with a fair sharing of profits. The Supreme Court has upheld its constitutionality.[74]

(2) What Constitutes Property: A Case Study of the Powers of the Maryland and Virginia Legislatures to Revoke Riparian Rights

Difficulties in arriving at a precise definition of "property" further complicate the problem of just compensation. Even if one avoids the "rigid conception of property as a fixed status" and defines property as any "economic value defined by the process of competition" (as suggested by Professor Joseph Sax),[75] a problem still remains. This problem is best illustrated by way of example. Maryland and Virginia law has given the owners of land abutting the Chesapeake Bay various rights to contiguous waters and submerged lands. To what extent, if any, do due process notions require the payment of compensation if the state legislatures abolish or modify these riparian rights? Since the power to modify is necessarily implicit in the power to abolish, the simpler way to ask the question is merely to ask whether the legislatures are free to abolish riparian rights. This approach also avoids the necessity of continually making the regulation-versus-taking distinction.

The common law of property has long recognized that it is possible to create interests in land which are revocable at the will of the creator. Such interests may be referred to generically as "licenses".[76] This narrows the question to whether riparian rights are "licenses" or "property". If they are licenses, then by definition they may be revoked at the pleasure of the creator (the state), and the due process clause requires no compensation.

To the extent that riparian rights are of statutory origin, the power of the state to modify or revoke them can also be dealt with in terms of another set of legal principles. State legislatures are said to have plenary powers. In legislatively creating rights to use state-owned navigable waters and submerged lands, they have a choice: to make the rights transitory or to make the rights permanent. If riparian rights are transitory, then again by definition they may be revoked or modified at the pleasure of the legislature, and the due process clause requires no compensation.

The test of whether riparian rights are freely subject to legislative abolition is the same whether the problem is discussed in terms of the property paradigm or the legislative enactment paradigm. It is said to turn upon the intention of the creator.[77] But since this intention is seldom manifested in the law-making process, courts often find themselves free to make policy in their search for a crypto-intention. Since it appears that the courts of Maryland and Virginia may have decided upon different policies, the problem will be discussed separately for the two jurisdictions.

Maryland

The conglomerate of rights which Maryland riparians have acquired over the years can be imprecisely catalogued as follows: water free from unreasonable pollution; reasonable use of the water; access to the water; land formed by accretions in front of land; reclaimed land or improvements made into the water in front of land; removal of sand, gravel and other materials from bed in front of land; and certain priorities in the locating of duck blinds, net or hand seines, and gunning reservations, in the water in front of land. Some of these rights have common law origins. It appears that the rights to unpolluted water, use of water, access to water and land formed by accretions, are all essentially judge-made. Doubts can be raised about the right to accretions, since it was explicitly mentioned in the 1862 legislation, but the Maryland Court of Appeals has said that, to the extent the statute gives the proprietor ownership of natural accretions, it merely restates the common law.[78]

Since these riparian rights are judge-made, their existence is explained in terms of the property paradigm. The Maryland Court of Appeals has said that they are "incident and appurtenant to ownership of the land itself"[79] and relate back to the initial grant of the riparian land into private ownership.[80]

By rationalizing riparian rights as incident to the initial outright grant of contiguous land, the court has created a strong implication that they are property rather than a license. This implication is buttressed by the law of other states. A number of arid states have abolished the riparian system of water rights in favor of appropriation or permit systems. The courts in these states have held that the state must pay just compensation for the taking of fresh water rights in order to constitutionally effect the change of systems.[81]

On the other hand, the Maryland Court of Appeals made the following statement by way of dicta in 1875: "But these principles of common law, governing the rights of riparian owners, however well established, are subject to change and modification by the statute law of the State . . . "[82] Although this rule ostensibly conflicts with the conclusion above, it can also be found consistent. A number of commentators have urged that a distinction should be drawn between "used" and "unused" riparian rights.[83] Indeed the Maryland legislature has utilized this distinction. In 1933 the General Assembly passed a statute making it unlawful for anyone to use state waters without a permit, but exempted from this prohibition uses in existence on January 1, 1934. This law is still in effect and has never been constitutionally challenged.[84] Hence, it appears that the constitutional protection given judge-made riparian rights may extend only to such rights as the riparian is actually exercising before the legislature decides to make changes or modifications.

Ordinarily, laws passed by a legislative body are subject to unfettered repeal or modification. But it is also possible for a legislative body to make grants of property interests with the recipients receiving rights which have due process protection. The Maryland Court of Appeals has not clearly resolved whether the statutes creating riparian rights are merely legislative in character or whether they are omnibus grants of additional property rights to riparian owners.

Perhaps the most important statutory riparian rights in Maryland are those to make improvements and to induce accretions artificially. These rights are presently set forth in Sections 45 and 46 of Article 54 of the Annotated Code of Maryland. In determining whether the Maryland General Assembly has the power to repeal or significantly modify the rights without compensating the riparian owner, a distinction should be made at the outset. Section 46 provides that "such improvements and other accretions . . . shall pass to the successive owners of the land to which they are attached, as incident to their respective estates". Therefore, after the accretion has occurred or the improvement has been constructed, it becomes property and cannot be taken by the state without payment of compensation.[85]

The more difficult question is whether the state can deprive riparian land owners of the right to make accretions or improvements in the future. The nature of these statutory rights was first described under the Act of 1745.[86] In Casey's Lessee v. Inloes, the court said: "The right of extending her lot or wharfing out to the city dock . . . was a franchise; a vested right, peculiar in nature; a quasi property, of which the lessor of the plaintiff could not be deprived, without her consent."[87] This description has been carried over and applied to the rights which were created by the Act of 1862 which is still in effect.[88]

The question then is what this description means. To the extent it says the rights are a "franchise" and a "quasi property", it would seem to indicate that they are something less than a property interest for which the state would have to pay compensation in order to take away. To the extent it says that the land owner has a "vested right" of which he cannot be divested "without consent", it would seem that the land owner might be protected against an uncompensated taking by the state.

This apparent inconsistency can be resolved only by looking at the context in which the courts have said that a riparian land owner has a vested right of which he cannot be deprived without consent. In all of these cases the question was whether an individual, a municipality, or the state could interfere with the riparian land owner's rights without a change in existing substantive law.[89]

Several of these cases, by way of dicta or implication, have dealt with the question of the state's power to change the law. In Baltimore & O. R.R. v. Chase the court said that the right of riparian owners to make improvement was subject to change or modification by statute law of the state.[90] In Garitee v. Baltimore it was first said that the rights of riparian owners cannot be taken away "without his consent, or by other competent legal means" but the court then went on to consider whether a subsequent statute had modified the 1862 statute which created the riparian rights thereby creating the implication that a modification of the 1862 statute would be a "competent legal means" for depriving riparian land owners of their rights.[91] Finally in Baltimore v. Canton Co. the court said it would " . . . assume, without deciding" that the statute giving riparian land owners the right to make improvements could be repealed "to the extent that improvements have not actually been made."[92]

Based upon this rather skimpy authority, a synthesis of the cases can be made which defines the nature of the statutory rights given riparian land owners in an internally consistent fashion. It would appear that the riparian land owners are given a legally protected right to induce accretions or to make improvements, subject to the General Assembly's power to modify these rights at any time before the accretion has been formed or until the improvement has been built.

This view of the extent of the riparian land owner's rights is supported by several other considerations. First, although the Maryland legislature has never attempted to constrict the rights granted by the 1862 statute in a direct way, it has granted bulkhead commissions, municipalities, and more recently the Department of Water Resources, power to regulate construction of bulkheads, piers and other waterway obstructions.[93] The exercises of these regulatory powers are not necessarily inconsistent with property rights in riparian land owners, since they can be reconciled as exercises of the state's police power to prevent interference with navigation. However, the cases have not so narrowly defined these regulatory powers. For example, in Cahill v. Baltimore the court held that the City of Baltimore, having been delegated the police power of the state, had an unfettered right to revoke the riparian land owner's privilege to make improvements at any time before the improvement was actually constructed.[94]

Moreover, the powers delegated to municipalities and bulkhead commissions have been deemed broad enough to permit them to draw divisional lines apportioning riparian rights among the various land owners. An exercise of this power was called into question when Baltimore City redrew division lines in a fashion more favorable to a piece of property it owned, as a preliminary to filling activities in the construction of an airport. The Federal District Court, applying Maryland law, held that the city could not change existing divisional lines since the riparian land owners had a vested property right to make improvements within these existing divisional lines.[95] On appeal, this decision was reversed. The Fourth Circuit held that the state had delegated to the city power to change and modify statutory riparian rights, and that the city could, in the exercise of this power, draw bulkhead or divisional lines in any way it considered to be in the public interest, so long as it did not interfere with improvements already in existence.[96] The decision of the Fourth Circuit Court of Appeals has been subsequently cited with approval by the Maryland Court of Appeals.[97]

A second consideration supports the conclusion that the General Assembly has the power to modify or repeal rights given riparian land owners by statute. As has been seen, Section 485 of Article 27 of the Annotated Code of Maryland gives to riparian land owners (or parties with whom they contract) the right to dredge sand, gravel and other materials. This right is intimately associated with the right to make improvements when the improvement involves the filling of wetlands or submerged bottom land, since filling is often economically impracticable unless spoil from dredging is available as fill.

With reference to the right of a riparian land owner to dredge, the Maryland Court of Appeals said in Smoot Sand & Gravel Co. v. Columbia Granite Dredging Corp. that the "right conferred by the statute in question is in the nature of a license or privilege to the riparian owner and those with whom he has a contract in writing, which may be revoked at any time by the legislature."[98]

Apart from these rights to make accretions and improvements and to dredge, riparian land owners are also given certain statutory preferences in relation to gunning and fishing rights. Sections 154, 171 and 253 of Article 66C of the Annotated Code of Maryland (1957) give riparian land owners first preference in establishing duck blind locations, reservation of the shore for gunning and positioning of fish nets or seines in front of their respective lands. It clearly appears that these sections are not intended as grants of property, but rather are part of the state's detailed police power to regulate hunting and fishing. This judgment is confirmed by dicta in Wampler v. LaCompte, where the court said that these gunning privileges were "revocable at any time by legislative enactment".[99]

Virginia

Most riparian rights in Virginia are a product of common law. The riparian's rights to access, to build a pier, to accretions and to reasonable use of the waters are judge-made, and explained as "property rights incident to the ownership of soil through or by which the waters of a stream flow."[100]

Ostensibly there is no problem in determining whether these rights are property and thereby entitled to due process protection. As early as 1876, the Virginia Supreme Court of Appeals said that "this right of the riparian owner [to erect a pier] is not a mere license or privilege but is property, property in the soil up to the line of navigability . . . ."[101] And as recently as 1965 the court reaffirmed this position in Thurston v. City of Portsmouth.[102] The court has also said, on several occasions, that if a state or municipality takes these rights from a riparian land owner, just compensation must be paid.[103]

However, a 1957 case decided by the United States Court of Appeals applying Virginia law raises a significant doubt as to whether these riparian "property rights" are protected by the due process clause from legislative revocation. In United States v. Smoot Sand & Gravel Corp.[104] the United States brought a condemnation proceeding to acquire two hundred and fifty acres of riparian land. The question presented on appeal was whether the District Court erred in permitting the jury to include in its valuation of the condemned land the rights of the owner to offshore sand and gravel deposits.

Judge Bryan of the District Court had instructed the jury in valuing the land to take account of the fair market value of the riparian's statutory right to offshore sand deposits. Judge Bryan also instructed the jury in making this calculation to consider the probability or improbability of the revocation of this right by the Virginia legislature.[105]

On appeal the correctness of Judge Bryan's instruction was affirmed. Judge Sobeloff, speaking for the court, said:

> Even a narrow construction of the statute cannot overlook what seems to us obvious, namely, that the riparian owner is awarded the exclusive right to dredge, and in case of its infringement by anyone he is entitled to be reimbursed for the loss which he thus sustains. It cannot be disputed that when one is assigned the right, pending its revocation, to use or consume something to the exclusion of all others,

> and to receive compensation from anyone who ventures to exercise the privilege without his authority, he has a species of property, regardless of what theory of property we may adopt.[106]

Judge Sobeloff also quoted the following equivocal opinion of the Attorney General of Virginia: "I am constrained to believe that Judge Bryan's construction of the Virginia statutes——to confer upon riparian owners a right in the nature of a license or profit a prendre, revocable by the Virginia Legislature——is a supportable interpretation . . . "[107]

From this opinion devolves a technique through which the Virginia Supreme Court of Appeals, if it deems wise, can find that the Virginia legislature has power to restrict or abolish common law riparian rights without payment of compensation to riparian land owners. Common law riparian rights may be treated as similar to the statutory right to sand and gravel——rights which exist only until revoked by the legislature. Since the body of prior case law which has said that common law riparian rights are property, and that riparian land owners are entitled to compensation for a taking, all dealt with the question in the absence of such a legislative revocation, the cases can be distinguished——that is, they hold only that the riparian rights are property and entitled to due process protection, pending legislative revocation.

c. Equal Protection——The clause of the Fourteenth Amendment which provides that the state shall not "deny any person within its jurisdiction the equal protection of the laws" has been given a restrictive interpretation. For the most part, only exercises of the state's police power which discriminate on the basis of race or nationality have been found to deny the protection of equality. But equal protection notions continue to place at least potential restraints on the state legislatures' authority to make classifications and to give to administrative agencies unlimited discretion.

(1) Legislative Classification: A Case Study of the Validity of the Maryland Legislation which Precludes Corporations from Taking Oysters

The equal protection clause does not prohibit legislative classification so long as it is made on a reasonable basis; it only forbids invidious discrimination.[108] The application of this vague norm is well illustrated by consideration of the validity of several provisions of the Maryland oyster laws. Article 66C, Section 708(e) of the Maryland Annotated Code provides that any resident of Maryland shall be entitled to lease submerged land for the purpose of cultivating oysters, but excepts from this provision corporations or joint stock companies. The prohibition against the taking of oysters by corporations is also implicit in other provisions of the oyster laws which permit only private individuals who own boats to get dredging licenses.[109]

The first question is whether corporations are "persons" within the meaning of the equal protection clause. Despite some doubts cast by dissenting opinions of Justices Black and Douglas, the Supreme Court has traditionally assumed that corporations are persons, constitutionally guaranteed equal protection.[110] This then raises the substantive question of whether the classification is reasonable or invidious.

There are two apparent reasons for the prohibition. First, it is probably designed to assure that non-residents will not be able to participate in the profits of the Maryland oyster industry indirectly through the use of a corporation. As already discussed the constitutional validity of this objective can be questioned under the privileges and immunities provision of the Federal Constitution.[111] However, there is another justification for the prohibition. Many oyster laws are designed to conserve the supply of oysters, by limiting the efficiency of the oyster industry through limitations on the method of take and length of season. This provision also can be viewed as a conservation measure designed to protect the supply of oysters by assuring that oystermen will be sole entrepreneurs unable to acquire the greater amounts of capital available through incorporation. Although the economic wisdom of this rather primitive method of conservation can be doubted, this conservation rationale probably meets the equal protection requirement of reasonableness.

(2) Administrative Discretion: Including herein a Case Study of Zoning in Maryland

The basic notion of equal protection is that the states should treat equally people similarly situated; its initial purpose was to prevent the states from passing legislation which discriminated against Blacks. But it soon became apparent that if the clause were to be effective the courts would have to look beneath legislation. Otherwise the states could pass non-discriminatory laws giving broad discretion to administrative officials who would in turn exercise this discretion in a discriminatory fashion. This phenomenon is well illustrated by the case of Yick Wo v. Hopkins.[112] There the Supreme Court held that a municipal ordinance which gave an administrative official unfettered discretion to permit or prohibit the operation of laundries in wooden buildings was a denial of equal protection when applied to prohibit Chinese laundries.

The potential conflict between equality and administrative discretion is, of course, not limited to areas of race or nationality. With the shift of the balance of law-making power from the legislative bodies to administrative agencies, the risk of administrative discrimination is pervasive. To a degree this possibility is hedged by limitations the delegating legislation may place on the administrative authority, but this hedge is often illusory since legislatures have come to recognize the simplicity of merely charging administrators to make their decisions in the "public interest".[113]

The dangers of administrative discretion, however, should not be permitted to obscure its usefulness. Indeed the collective legislative judgment of this century appears to be that the utility of administrative discretion——the provision of a technique through which governmental planning decisions can be made by "experts" on a flexible, case by case basis——outweighs the risk, the possibility of invidious discrimination.

Certainly in the area of natural resource planning it is fair to say that guarantees of equal treatment have been sacrificed in order to permit flexible planning. The United States Supreme Court has assiduously avoided overturning such decisions as denials of due process or equal protection.[114] The ability of lower courts to consider the correctness of such decisions has been curtailed by the procedural setting of judicial review which places the burden of proof on the party attacking the correctness of the administrative decision. For example, in Cahill v. Baltimore[115] the plaintiff, a riparian land owner contended that the city in establishing the pierhead line had denied him equal protection since the line was drawn to give his neighbor more beneficial wharfing-out space. The Maryland Court of Appeals found the pierhead line to be reasonably drawn and said that the establishment of such lines "is preeminently work for special officials made familiar with the demands of all navigation and all wharfing there, not for the processes of a court of law."[116]

Notions of the value of equality have proved difficult to kill, however. Lately, the whole rationale behind the need for unfettered administrative discretion in the planning process has come under frontal attack. It has been pointed out that planning decisions are not really made on the basis of an appraisal of objective data, but rather represent a choice between community values, and that in choosing between values the professionals have no peculiar expertise.[117]

To a degree courts have responded to these criticisms. For example, in Scenic Hudson Preservation Conf. v. Federal Power Commission[118] the Court of Appeals for the Second Circuit remanded a case to the Federal Power Commission for a new hearing, because the Commission in approving an electric power project had not adequately considered effects of the project on natural beauty and historic shrines, and had failed to consider alternative means of providing electric power.

Moreover, with respect to zoning (the basic land use planning technique of local governments), some state courts have retained a measure of control over administrative discretion in an effort to minimize denials of equal protection. These efforts are well illustrated by the Maryland experience.

Zoning as initially conceived and as constitutionally approved by the Supreme Court in Euclid v. Ambler Realty Co.[119] envisioned land use segregation—that is, a system of grouping similar uses in geographical districts and excluding dissimilar uses. Within this model problems of equal protection were minimized. After the geographical districts were established (presumably according to objective standards) people owning land similarly situated were treated equally with reference to the uses they could make of that land.

But there are several problems in the Euclidean model. The first is the underlying premise that differing uses are incompatible and must be separated. While it is true that the unplanned proliferation of varying uses is to be avoided, later developments in planning theory have demonstrated that most uses, carefully controlled, can exist harmoniously in a variety of surroundings. Second, Euclidean zoning is inflexible. Once the geographical grid is applied, it is difficult to change. This has led (and continues to lead) to absurd results. Finally, geographical districting is, at best, an extremely inefficient and clumsy method of land use control. Theoretically, it does not permit the selective, case by case, value judgments which have become the hallmark of modern administrative decision making.

The response of the Maryland Court of Appeals to efforts to inject flexibility and increased discretion into the traditional Euclidean model present an interesting interplay between administrative exercise of state police power and constitutional standards. Zoning is a delegated function. The power to zone was held in Euclid to be justified as an exercise of the state police power. In Maryland the General Assembly has, through a series of statutes, delegated this power to the various local legislative bodies throughout the state.[120] Many of them have further delegated some of this power to local administrators or administrative commissions. Thus, the whole system in Maryland is pyramidal, with a flow of authority from the General Assembly filtering down to a multiplicity of local bodies.

In enacting Maryland's general zoning enabling statutes the General Assembly clearly had in mind a system of Euclidean zoning.[121] In fact, the first statute simply embodies the Standard Zoning Enabling Act prepared in 1927.[122] The statutes do allow some degree of flexibility. Three methods of amending a zoning plan are envisioned: variances, special exceptions, and outright reclassifications. Variances are permits granted on a case-by-case basis, which allow uses in districts where they are normally forbidden. In theory, the basic criteria used in evaluating petitions for variances are simple. The applicant must show that the existing zoning scheme works a particular hardship on him and that the proposed non-conforming use will not have a deleterious effect on either the immediate neighborhood or the zoning plan as a whole. In practice, variances have proven to be a prime source of influence selling and pressure politics.[123] And even in theory they are not designed to permit efficient, flexible planning.

Special exceptions are designed to permit uses on a qualified basis. They are utilized when it is felt that the indiscriminate operation of some permitted uses would have an adverse effect on the zoning district. Such uses are permitted, on a case-by-case basis, only when the zoning authorities are satisfied that the land owner complies with restrictions contained in the zoning ordinance itself.[124]

The third method of changing an existing zoning plan is outright reclassification. However, the Court of Appeals has placed a serious obstacle in the path of such efforts. Zoning is considered to be a legislative function. Therefore, the presumption of validity which attaches to any legislative act also attaches to the original zoning ordinance. The Maryland court has gone one step further in the case of zoning and held that the presumption attaching to the original zoning plan is so strong that it prevents a similar presumption in the case of an amendment or reclassification. Hence, the court has held, a mistake in the original zoning plan or a change in neighborhood conditions must be affirmatively shown in order for an amendment or reclassification to be upheld. "We have repeatedly held that there is a strong presumption of the correctness of original zoning, and that to sustain a piecemeal change therefrom, there must be strong evidence of mistake in the original zoning or else of a substantial change in conditions."[125] "Spot zoning" is a form of piecemeal reclassification. While apparently covered by the "mistake-change" rule, it has received special attention by the Court of Appeals. Definitions of "spot zoning" vary. Essentially it is the reclassification of one lot, or other small land area, to a use different from the surrounding neighborhood. The validity of this kind of reclassification has turned on whether the court felt the reclassification was made for the private benefit of the owner or for the public good.[126]

Although the criteria used in deciding cases under the "spot zoning" and "mistake-change" rules are reasonably identifiable, their theoretical foundations are far from clear. To begin with, the two rules have not been integrated. As indicated above, they both appear to be applicable to some reclassifications. Yet the courts have simply applied one or the other, or sometimes talked about both, without mentioning why one or the other was applicable. Most "spot zoning" decisions, however, have dealt with reclassifications to permit shopping centers, service stations and the like.[127] When such reclassifications are upheld the court usually has found that a need for such establishments has arisen in the neighborhood and hence they serve the public good. Arguably, this finding also shows a change in conditions.

A question more perplexing than any inconsistency which may exist between the two rules is their reason for being in the first place. One commentator has suggested that the Court of Appeals' reluctance to sanction piecemeal reclassification has its roots in the due process clause of the Fourteenth Amendment.[128] This position is somewhat weakened by the many decisions holding that a zoning scheme confers no property rights, as such, on the property owners covered by its regulations.[129] A more likely foundation for the rule might be the equal protection clause. A case-by-case method of classification runs a serious risk of becoming mere allocation of favoritism without any governing standards. The "mistake-change" rule prevents this.

Another possible source of the rule is the "comprehensive plan" requirement in the general enabling statutes. This provision (discussed more fully later) simply requires the zoning regulations to be "in accordance with a comprehensive plan".[130] Conceivably the court could construe this to mean that amendments must be comprehensive as well.

Against this mottled background the Court of Appeals decided the case of Huff v. Board of Zoning Appeals,[131] which gave apparent judicial approval to a new attempt to introduce flexibility into the zoning process——the "floating zone". The Huff case arose out of an extensive zoning revision carried out in Baltimore County in 1954. The county commissioners redistricted the county into twelve categories of zones, six residential and six manufacturing and business. One of the manufacturing categories, manufacturing restricted or M.R., had no geographical location. The revised Zoning Regulations for Baltimore County provided, in § 250.1:

> In order to provide greater freedom in the selection of industrial areas and at the same time to secure and maintain effective control over the location, type, and arrangement of industrial uses and to protect the uses in neighboring residential zones, areas for Restricted Manufacturing Zones may be designated on the zoning map and/or may be created by petition in accordance with the procedure outlined in the following sections.[132]

The regulations went on to provide a system of petitioning and review and to outline the restrictions to be imposed on the use of rezoned land that protected neighboring areas.

The new system of reclassification was attacked on the ground that it did not comply with the "comprehensive plan" provisions of the enabling statute. The Court of Appeals disagreed, holding that—

> A zoning plan does not cease to be a comprehensive plan because it looks to reasonably forseeable potential uses of land which cannot be precisely determined when the zoning is passed. In zoning of undeveloped areas, account can be taken of potential uses reasonably forseeable, that is, as the Planning Commission put it, the undeveloped areas can be looked upon as a reservoir of future land uses.[133]

It was also argued that there had been an improper delegation of power from the county commissioners to the Zoning Commissioner who approved or rejected applications for rezoning. The court likewise rejected this argument and held that the restrictions and guidelines provided by the regulations were more than sufficiently definite and specific. It went on to hold that—

> If the regulations be read as we read them, it is clear that the Manufacturing Restricted classification is analogous to a special exception, and the rules which are applicable to special exceptions would apply, not the general rules of original error or change in conditions or the character of the neighborhood, that control the propriety of rezoning.[134]

Although most later cases have not made the distinction, there are really three separate issues involved in the Huff decision. The first is whether the zoning scheme drawn up by the local legislative body is compatible with the enabling statute. This issue was favorably resolved in Huff through a liberal interpretation of the "comprehensive plan" requirement.

The second issue is the constitutionality of the delegation of discretion by the local legislative body to an administrative officer (in Huff, the Zoning Commissioner). The Huff court decided this issue very neatly by holding that the restrictions contained in the regulations met the traditional test of clarity and distinctness. However, the issue becomes much less easily resolved when the legislative body itself performs the "administrative" task of applying the guidelines which it enacts. In such a case the third, more fundamental, issue becomes controlling: whether the local legislative body has the discretionary power in the first place.

This issue is not discussed in Huff, although an affirmative resolution is obviously implied by the result reached. Nor is the question really answered by any of the other early floating zone cases.[135] The unanswered issue running through these cases is the extent of the local legislative body's discretion apart from any restrictive language in the enabling act. In other words, how much discretion can be delegated to such bodies. The ostensible answer in Maryland is not very much. The "mistake-change" rule apparently limits the exercise of discretion rather severely. Yet in Huff, a relatively liberal method of reclassification was permitted. The two judicial postures appear to be inconsistent. However, cases decided since Huff seem to indicate that the inconsistency, if any, is slight.

In Costello v. Sieling[136] the court approved a floating zone which permitted trailer parks to be located in residential neighborhoods. The court placed heavy emphasis on the analogy between a floating zone and a special exception.[137] In Chatham Corp. v. Beltram the court in dicta attempted to distinguish between floating zones and Euclidean zoning.

> The R-12 and the R-16 zones are typical Euclidean residential zones. They have the basic concepts of such zones, of set districts restricted as to the use and dimensions of the structures which may be put upon them. Their restrictions are uniform . . . A floating zone is a special detailed use district of undetermined location, a district in which the proposed land, location, size and form of structures must be pre-approved, and which, like a special exception use, is legislatively pre-deemed compatible with the areas in which it may thereafter be located on a particular application, provided specified standards are satisfied and actual incompatibility is not revealed.[138]

In other words the floating zone was being restricted to the confines of the special exception. The key issue was that of "compatibility". If the uses provided for in the floating zone must be compatible with the neighborhood, then the flexibility promised by this new zoning innovation is illusory.

Any doubt about this issue was resolved in Bigerho v. Montgomery County Council where the court held that " . . . the floating zone is subject to the same conditions that apply to the granting of special exceptions, *i.e.*, the use must be compatible with the surrounding neighborhood . . . ."[139]

If a local legislative body attempted to enact a floating zone which permitted obviously incompatible uses, then it appears that the court would hold that the analogy to a special exception had broken down and decide the appropriateness of each petition for reclassification by reference to the "mistake-change" rule and the tests used to measure spot zoning.

The necessity of the restrictions, mentioned above, is the second basic shortcoming of the floating zone and gives some clue to its relationship to the "mistake-change" rule. The Court of Appeals has been careful to emphasize that the reclassifications involved in the decisions above were not the product of unfettered discretion. This has been true even when the local legislative body acts in an administrative capacity in addition to its legislative function. The court apparently feels that the local legislative bodies were bound by their initial enactment of regulations covering the floating zone. This sounds suspiciously like an application of the "mistake-change" rule all over again.

The Maryland court's position apparently stems from a deep-seated aversion to discretionary interference with property rights. Or perhaps, put more particularly, the court has been willing to accept geographical separation of uses, but will not sanction land use "planning". The value of zoning, and hence its relation to public health, welfare, etc., lies in the formulation of a plan——any plan——and not in the concept of planning. Hence, a city council may prepare a master plan. But once prepared, the plan is not susceptible to amendment unless there is a change in conditions——not a change in planning theory.

In summary, it appears that the Maryland Court of Appeals may share the following reservations of Professors Haar and Herring on the desirability of administrative discretion in the zoning process:

> It may be questioned whether the floating-zone technique does not, in enlarging property rights, curtail proportionately the at least coordinate right to equal protection of the law, as well as undermine the theoretical basis of zoning. Like any use of the police power to restrict the individual's liberty, zoning is justified only if necessary to achieve a permissable community goal. Although no one disputed the propriety of the goal of zoning—a better physical environment—the necessity of employing zoning was vigorously contested. Justification was found in the asserted superiority of governmental regulation over the market-price mechanism as a means of achieving that desirable community goal. What remains of this basis when planners permit the power to determine the pattern of development to revert to individual, uncoordinated consumer action? What happens to equality when, in order to maximize community welfare, some property owners are restricted to uses prescribed by the government, while others, motivated by their own welfare, can alone determine what use of their property.[140]

2. Delegation of Power to Units of Local Government

The states of Maryland and Virginia have created a multiplicity of local governmental bodies with some jurisdiction over Chesapeake Bay resources. Fourteen counties and the City of Baltimore in Maryland,[141] and thirty-one counties and sixteen cities in Virginia,[142] have shoreline in the estuarine zone.

Since these units of local government are creatures of the state, they have only those powers delegated to them by the state constitution or the state legislature. Within the scope of their delegated powers, the units of local government have authority to enact and administer regulations of their own. In the process of delegating powers, the Maryland and Virginia legislatures have created labyrinths. But, in overly simplified terms, the delegated powers can be outlined as follows.

In Maryland there are two classes of counties—non-charter and charter. Anne Arundel, Baltimore and Wicomico are the only charter counties within the estuarine zone,[143] but for many purposes Baltimore City is treated as a charter county.[144] The practical significance of this distinction is that, while non-charter counties have some ordinance making power, the Maryland General Assembly still operates as their primary law making body. On the other hand, charter counties take on the primary role in passing local ordinances.[145]

Acts of the Maryland General Assembly have given non-charter counties the power to pass ordinances relating to zoning, sewage control, etc.[146] The General Assembly retains, however, power to pass local laws for the counties which overrule these ordinances.

Charter counties are given broader law-making powers. By statute they are authorized to pass ordinances relating to drainage, the taking of fish and game, disposal of wastes, nuisance conditions, zoning and planning.[147] The General Assembly is prohibited from enacting local laws which apply to only one charter county or Baltimore City.[148]

Article 4, § 65 of the Virginia Constitution provides:

> The General Assembly may, by general laws, confer upon the boards of supervisors of counties, and the councils of cities and towns, such powers of local and special legislation as it may, from time to time, deem expedient, not inconsistent with the limitations contained in this Constitution.

Pursuant to this constitutional authority the legislature has delegated to units of local government the power to enact ordinances relating to public water supply, sewage disposal, water pollution, and zone and land use planning.[149] The legislature has also authorized the establishment of municipal port commissioners[150] and has created the Virginia Beach Erosion Commission.[151]

D. The Power of Eminent Domain

Like the police power, the power of eminent domain (taking of private property for a public use) is said to be an inherent attribute of sovereignty. As already noted, however, the constitutions of the United States, Maryland and Virginia limit this power by requiring that just compensation be paid.

The taking of private property for a public purpose can occur in a variety of ways. In the preceding section it was noted that sometimes courts find that what a state considers an exercise of its police power is really a taking of property, and requires the state to pay damages for the resulting diminution of the private property's value. This result is referred to as inverse condemnation. This section, however, deals with direct condemnation. Condemnation is the legal proceeding through which the federal government, the state governments, or local governments or public utilities (which have been delegated the power of eminent domain) can take private property when they are unable to negotiate a mutually satisfactory price with the owner. In the condemnation proceeding the judge or jury is called upon to determine the fair market value of the property, and the court's decree orders transfer of the property upon payment of this amount.

1. The Public Use Concept

The most frequently raised legal question in condemnation proceedings relates to whether the taking is in fact for a "public use". While the United States Supreme Court and the highest courts of Maryland and Virginia have agreed that private property may only be taken for a public use, they have reached different conclusions as to what constitutes a public use.

The United States Supreme Court addressed itself to the limitations which the Fifth Amendment places on the federal condemnation power in Tennessee Valley Authority v. Welch.[152] Mr. Justice Black, speaking for the majority of the court, apparently held that whether or not a particular taking was for a public use was a question for Congress and not one for the court.[153] However, the concurring opinion of Chief Justice Stone and Justice Reed insisted that the court could review this question,[154] and Justice Frankfurter interpreted Black's opinion as recognizing that whether a taking is for a public use was within the scope of judicial competence.[155]

Despite the inconclusive nature of this opinion, the question is almost moot since the court has assiduously avoided overturning Congressional designations of public uses. For example, in Brown v. United States[156] the Supreme Court held that where establishment of a reservoir flooded parts of a town the federal government could condemn nearby land for a new town site notwithstanding the fact that the land condemned would eventually end up in private hands.

The Maryland Court of Appeals has clearly held that the public use question is subject to judicial review.[157] But the court has vacillated as to what constitutes a public use. Initially the court held that after the taking the public must have the right to use the land.[158] Of late, under pressures occasioned by need for a private role in urban redevelopment the court has held the fact that " . . . after the taking the property may be put into private hands does not destroy the public character of the taking insofar as that taking may accomplish a proper public benefit."[159] A more recent case has synthesized these seemingly inconsistent cases by pointing out that condemnation for urban redevelopment purposes is based upon a special constitutional section and then saying by way of dicta that in ordinary condemnation proceedings, public use means use by the public rather than use benefiting the public.[160]

The Virginia Constitution apparently dispenses with this problem by providing that the term 'public use' is to be "defined by the General Assembly".[161] But the Supreme Court of Appeals has held that a legislative declaration that a contemplated use is a public one, although presumed right, is not conclusive and is subject to judicial review.[162] Working within this doctrinal framework the court initially posited that public use meant use by the public.[163] The court retreated from this position to uphold the constitutionality of urban renewal legislation, rationalizing that the turning over of condemned land to private enterprise was merely incidental to the main purpose of the act.[164] Recently, however, in Rudee Inlet Authority v. Bastian[165] the court struck down legislation which gave the Authority power to condemn land in Virginia Beach, because the statute permitted "sale or lease" of condemned land to private parties.

Hence, it appears that in both Maryland and Virginia, the courts are still disposed to the public use concept in order to keep government from competing with private enterprise, in the land market.

2. Taking of Development Easements

While historically eminent domain has been most often used to acquire outright ownership of land, the power may also be used to acquire lesser interests such as easements. A number of commentators have suggested that government acquire, through condemnation if necessary, development easements.[166] Under such arrangements the private owner retains the right to use and enjoy the land subject to the right of the governmental body to foreclose further development.

This approach has several potential uses in the estuarine zone. It provides a technique through which government can preserve open space, and riverscape, in a pristine state. Theoretically, at least, it can serve another public goal. It provides a technique through which governmental bodies can hedge against increases in land values in anticipation of their needs to acquire property outright in the future. For example, a department of parks might be able to predict that in twenty years it will need park land in what is now a relatively undeveloped area. By acquiring a development easement now, it could later acquire the property outright without paying compensation for any increases in the land's value (due to increased development potential) during the interim.

In either instance, the advantage of the partial taking over an outright taking is that it costs less. Compensation for the taking of development rights is computed by subtracting the value of the land with no possibility of development from its present market value. The magnitude of the saving depends, of course, on the fact-finder's appraisal of these relative values. Generally, it appears that the saving will only be significant where the land can be used in its present state (such as for a farm or residence) because otherwise almost the full value of the land is expressed in its development potential.

Since under a development easement the government acquires no actual rights to use land, doubts can, of course, be raised as to whether the taking is for a public use. With reference to federal action there appears to be no significant problem, since the federal courts have evinced their disinclination to review Congressional determinations of public use. In Maryland, by virtue of a 1967 statute, there is a legislative declaration that the preservation of open space is a "public purpose" and that condemnation is an appropriate way to preserve it.[167] This declaration is not binding on the courts—since the "public use" limitation arises from the Maryland Constitution—but it would certainly be influential.

3. Just Compensation

The just compensation principle requires that private property owners be paid the market value of property condemned. When the property taken abuts on the water, riparian rights are to be considered in determining this value. In considering the value of riparian rights an interesting problem exists. As already noted, riparian rights are to a greater or lesser degree transitory. They are not only subject to changes in value occasioned by the state's exercise of its police power (as is all property), but may also be subject to direct legislative modification or abolition.

The courts have generally obscured the actuarial niceties in arriving at the market value of riparian rights by turning the problem over to the jury with only broad instructions. Dealing with the taking of a Virginia riparian's right to sand and gravel, the Fourth Circuit Court of Appeals first noted that even though under Virginia law these rights were subject to revocation by the legislature, they had not in fact been revoked, and they therefore had value and were compensable.[168] The court went on to approve the District Court's instruction which told the jury, in determining the value of the right to sand and gravel, to consider the probability or improbability that it would even be disturbed by the sovereign.

The Maryland Court of Appeals has approved a trial court's instructions which provided that, in determining the fair market value of riparian land, riparian rights should be considered, including:

> the exclusive right to make improvements out into the water in front of . . . fast land, provided such improvements do not interfere with the navigation of the stream, but that this right to improve out into the river, until actually availed of, is subject to the right of the United States Government to use the land under the water in aid of navigation without consent of the owner and without compensation, and this right to improve or wharf out into the river is subject also to the right of the Mayor and City Council of Baltimore and the United States Government to establish, alter, or extend the lines beyond which no piers, bulkheads, wharves, pilings or other structures of any character may be built or extended.[169]

This instruction appears to fail to take directly into account the additional possibility that the right to make improvements might be modified or abolished by the Maryland General Assembly.

E. Interstate Compacts

1. Development

Compacts have existed since the American Revolution. The early compacts were the product of negotiations between the states in the resolution of particular disputes. For example, Maryland and Virginia entered into a compact in

1785 which settled their common boundary. But fifty odd years ago governmental problems began to outgrow state boundaries. In the early 1920's, the states of New York and New Jersey established the Port of New York Authority. In 1925 Felix Frankfurter and James Landis published an article urging the use of compacts as devices for managing regional problems.[170] In response to these stimuli there were in 1966 a total of 144 compacts in force.[171] Almost all of these have received the consent of Congress which is required by the United States Constitution.[172]

Despite this proliferation, doubts can still be raised as to the efficacy of the compact device. It has been contended that compacts are often used not to solve regional problems, but rather to deter federal activity by creating a new (albeit inactive) governmental structure.[173] In response to this criticism and to promote cooperation between the states and the federal government, a variation on the compact format, i.e., federal-interstate compacts, has been proposed.

In 1960 a group of researchers at Syracuse University, studying management problems on the Delaware River, proposed a compact among New York, New Jersey, Pennsylvania, Delaware and the federal government.[174] The federal government would sit on the compact commission as an equal partner with the same rights and privileges as each individual state. This proposal has been implemented and today functions as the Delaware River Basin Commission.

2. Existing and Proposed Water Resource Compacts to which Maryland and Virginia are Parties

a. The Interstate Commission on the Potomac River Basin[175]—This is a commission created by interstate compact which was set up for the purposes of studying and reporting on the Potomac River Basin. It was adopted by Maryland in 1939, Virginia in 1940, West Virginia in 1941, Pennsylvania in 1943, and was consented to and joined in by Congress in 1940. (Congress joined the compact as an equal member, since Congress controls the District of Columbia—one of the main users of Potomac River water.) Each state has three representatives on the commission, and there are three representatives from Congress. The Commission is authorized to collect data and make recommendations as to the water quality standards that should be adopted on different stretches of the river. These recommendations cannot be made without the approval of at least two of the three members from the state concerned. In 1960 the General Assembly of Maryland gave the Governor power to sign an amended version of this compact which would grant the commission more enforcement powers.[176] The other states signatory to the compact, however, have never agreed to this amendment of the compact, so it stands as originally written.

The states of Maryland, Pennsylvania, Virginia and West Virginia and the federal government have negotiated a new agreement—the Potomac River Basin Compact[177]—which if ratified will completely supplant the existing compact. The proposed agreement is a federal-interstate compact which creates a commission modeled closely after the Delaware River Basin Commission. The commission is given broad managerial and regulatory powers over the Potomac from its head waters to where the Potomac estuary joins the main arm of the Chesapeake Bay.

b. The Atlantic States Marine Fisheries Commission[178]—This commission reflects a compact in which Maryland and Virginia are among the fifteen member states. The alleged purpose of the commission is to coordinate and study the fishery practices in the member states with reference to both commercial and sport fishing, and to engage in research to determine new and better ways of assisting and controlling the fisheries.

Each of the states has three members on the commission, but the work is done almost exclusively by a paid staff, and the research activities are contracted out to the U.S. Fish and Wildlife Service, and the U.S. Bureau of Commercial Fisheries. In practice, the Commission has done almost nothing in the way of regulation and has, according to a detailed study made by a political scientist in 1965, become little more than a lobbying agency for the Atlantic Coast commercial fishermen.[179]

c. The Potomac River Fisheries Commission[180]—This commission was set up by a compact between Maryland and Virginia, negotiated in 1958 and ratified by Congress in 1962, and is composed of three members from each state. The Maryland representatives must all be members of the Department of Chesapeake Bay Affairs; the Virginia members must all be from the Virginia Fisheries Commission.

The commission is charged with controlling the biotic yield of the Potomac River estuary from the District of Columbia boundary to the main arm of the Chesapeake bay. It has the power to issue regulations concerning the planting of oysters, and the type, size, season and daily limits for all shellfish and finfish taken out of the river. The commission has the power to fine violators up to $1000 per offense. It also may engage in research projects.

d. Proposed Susquehanna River Basin Compact[181]—The Susquehanna River Basin Compact is to be composed of representatives of Maryland, Pennsylvania, New York and the federal government. It has been ratified by the states and needs only Congressional approval to become operative.

In general the commission which it creates is expected to plan and regulate uses of the Susquehanna River. The compact provides that each party shall have one vote, and gives the commission the following powers: to develop a comprehensive plan for the utilization of the water resources of the basin, to build and maintain any necessary structures; to set water quality standards and to enforce these standards; to control all withdrawals of water from the river; to issue bonds to finance its projects; to sell any hydroelectric power it might produce; and to charge for the use of the water in any way that is reasonable and necessary.

3. Legal Problems

Despite the proliferation of compacts, there are few cases involving the multitude of legal problems that can arise. For example, it is not known whether a state can be forced to live up to a compact it has signed. In 1951 the Supreme Court was faced with this question, but neatly avoided deciding it.[182] West Virginia had ratified the Ohio River Valley Sanitation Compact, but the West Virginia Supreme Court held that some of the provisions of the compact violated the state constitution and that, therefore, the state could not have validly entered the agreement.

The Supreme Court avoided the issue of whether the state was still bound by the terms of the compact, instead ruling that the West Virginia Supreme Court had misinterpreted its own constitution. On this basis the court found that the compact did not violate the state constitution, and hence the membership of the state was valid. Several of the justices, however, indicated that they would have liked to decide the case on the basis of estoppel, i.e., that once West Virginia ratified the compact, and other states ratified it in the belief that West Virginia had ratified it, West Virginia should not be permitted to avoid its effect. The majority of the Supreme Court did not agree, however, and there is still no decision as to whether a state can be compelled to live up to a compact.

In the same way there has been no decision as to whether Congress can abolish or modify an existing compact by repealing or amending the consent legislation. This issue has been raised, but never decided. In 1960 Congress passed a resolution to determine whether the act consenting to the Port of New York

Authority should be repealed or amended, and a subcommittee went out and subpoenaed the records of the Authority for a hearing. The director of the Authority, as ordered by the governors of New York and New Jersey, refused to produce the records and was cited for contempt of Congress. In defense, the director argued that Congress had no power to repeal or amend the consent act and, therefore, the investigation was illegal.

The United States District Court for the District of Columbia held that Congress indeed had this power, and found the director guilty.[183] On appeal, the conviction was reversed upon technical grounds having nothing to do with the validity of the investigation and the Supreme Court refused to review the decision.[184] The matter was dropped and the subcommittee did not issue a new subpoena. Thus, there is still no authoritative decision. There has been, however, a great deal of dialogue concerning the power of Congress to review the operations of an interstate agency by use of the subpoena power,[185] although there has been very little discussion of the power of Congress to repeal or amend its consent.[186]

Another legal problem relates to the jurisdiction of federal courts to resolve disputes relating to the interpretation of compacts. Under the federal system, federal and state courts have concurrent jurisdiction if the suit is between citizens of different states and also if the suit involves a "question" of federal law. The Supreme Court decided some years ago that the interpretation of a compact is a federal question for jurisdictional purposes,[187] but in recent years this decision has come under increasing attack. It has been argued that the sole basis for federal jurisdiction is that Congressional consent to a compact makes the compact a federal law, and that this is an unreasonable interpretation of the compact clause of the Constitution.[188]

The advent of federal-interstate compacts has given rise to new problems relating to the extent to which the federal government's representative can commit the federal government to the compact commission's decisions. One of the basic notions of the constitutional system is that a legislative body cannot bind the hands of its successors, since this would be ceding away a part of its sovereignty. The federal-interstate compacts are, of course, an effort to do exactly this—to transfer certain legislative powers of the signatory states and the federal government to a commission, for the compact's duration.

The problem is not necessarily acute. Congress and the state legislatures do have power to promise future appropriations and to delegate broad powers. So long as they keep their promises and do not revoke their delegations, the constitutional issue may never arise. Furthermore, since Congress approves compacts, they become in a sense federal law, and the state legislatures may be viewed as bound (even though acting alone they could not have bound themselves).

Whether Congress itself is bound by the terms of a compact is highly questionable. The draftsmen of the Susquehanna River Basin Compact and the Potomac River Basin Compact both considered the problem but responded in different ways. The Susquehanna River Basin Compact makes it abundantly clear that Congress is free to ignore the terms of the compact.[189] The Potomac River Basin Compact gives the commission which it creates a stronger hand. To a degree the compact purports to limit the powers of Congress. It recognizes the Congressional power by a statute expressly enacted for the purpose, to revise the conditions under which the United States is a party to the compact. But until and unless such legislation is enacted, Congress is supposedly bound by the terms and conditions of the compact. For example, Congress is precluded from expending funds for a project or facility not approved by the commission.[190] The constitutionality of this limitation on Congressional power is open to question.

F. Conclusions

Demands of the twentieth century have created pressures for more comprehensive regulation of all human conduct. Legal institutions have responded to these pressures on the Chesapeake Bay. Some new regulation has devolved from legislatures and courts, but the bulk of rule-making activity has shifted to the executive branch. Administrative agencies control offshore construction, land use, water use, waste disposal, shipping and the taking of fish and oysters. The role played by legislatures and courts is often limited. Legislatures pass statutes which have the substantive effect of delegating almost unfettered rule-making power to administrative bodies. Courts are presented with cases in a procedural context which presumes the correctness of prior administrative rulings.

As is to be expected in a federal system, the allocation of regulatory power has been diffusive. Federal agencies have powers which relate, more or less, to the regulation of interstate commerce. Maryland and Virginia have plenary powers (except to the extent pre-empted by the federal government) but have delegated some regulatory activities, including the zoning function, to local governments. The Potomac River Fisheries Compact creates an interstate repository for regulatory power, and the proposal of federal-interstate compacts for the Potomac and Susquehanna Rivers create the possibility of others.

Federal and state courts have imposed some limitations on regulatory activity. Most of these limitations have been premised upon provisions of the United States and state constitutions. Although the United States Supreme Court has abdicated the role of a super-legislature passing upon the wisdom of regulation, state courts have continued to review regulation from a due process and equal protection perspective. Most significantly state courts have indicated a solicitude for private land owners and have on occasion required the state to pay compensation if it places onerous restrictions on the use of land.

* Notes *

III. PUBLIC REGULATION

1. Toomer v. Witsell, 334 U.S. 385, 402 (1948).
2. *See* pp. 132-36 *infra*.
3. U.S. CONST. amends. V, XIV; MD. CONST., *Declaration of Rights* art. 23, art. III, § 40; VA. CONST. § 58.
4. U.S. CONST. amend. V (applies to federal action), amend. XIV (applies to state action).
5. 22 U.S. (9 Wheat.) 1 (1824).
6. The Daniel Ball, 77 U.S. (10 Wall.) 557 (1870).
7. United States v. Rio Grande Irr. Co., 174 U.S. 690 (1899).
8. United States v. Appalachian Power Co., 311 U.S. 377 (1940); *see also* Oklahoma *ex rel* Phillips v. Guy F. Atkinson, 313 U.S. 508 (1941).
9. 311 U.S. 377, 426 (1940).
10. 373 U.S. 546 (1963).
11. Dunham, *Griggs v. Allegheny County in Perspective: Thirty Years of Supreme Court Expropriation Law*, 1962 SUPREME COURT REVIEW 63.
12. *See* J. Sax, *Takings and the Police Power*, 74 YALE L. REV. 36, 37 (1964).
13. *See* Greenleaf Lumber Co. v. Garrison, 237 U.S. 251 (1915); Lewis Blue Point Oyster Co. v. Briggs, 229 U.S. 82 (1913).
14. Union Bridge Co. v. United States, 204 U.S. 364 (1907).
15. 237 U.S. 251 (1915).
16. 240 U.S. 572 (1916).
17. 93 U.S. 4 (1876).
18. 324 U.S. 386 (1945).
19. Lewis Blue Point Oyster Co. v. Briggs, 229 U.S. 82 (1913).

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20. 312 U.S. 592 (1941).

21. United States v. Chandlar-Dunbar Power Co., 229 U.S. 53 (1913).

See, e.g., United States v. Grand River Dam Auth., 363 U.S. 229 (1960); United States v. Twin City Power Co., 350 U.S. 222 (1956); United States v. 531.13 Acres of Land, 366 F.2d 915 (4th Cir. 1966).

23. United States v. Willow River Power Co., 324 U.S. 499 (1945).

24. United States v. Virginia Elec. & Power Co., 365 U.S. 624 (1961).

25. Southern Pac. Co. v. Arizona, 325 U.S. 761, 767 (1945) (citations omitted).

26. *Id*. at 768-69.

27. Willson v. Black-Bird Creek Marsh Co., 27 U.S. (2 Pet.) 245 (1829).

28. Cooley v. Board of Wardens, 53 U.S. (12 How.) 299 (1851).

29. Kelly v. Washington, 302 U.S. 1 (1937).

30. Huron Cement Co. v. Detroit, 362 U.S. 440 (1960).

31. Packet Co. v. Keokuk, 95 U.S. 80 (1877).

32. Geer v. Connecticut, 161 U.S. 519 (1896)

33. Hudson Water Co. v. McCarter, 209 U.S. 349 (1908).

34. Smith v. Maryland, 59 U.S. (18 How.) 71 (1855).

35. Gibbons v. Ogden, 22 U.S. (9 Wheat.) 1 (1824).

36. Sinnot v. Davenport, 63 U.S. (22 How.) 227 (1859).

37. Mayor of Vidalia v. McNeely, 274 U.S. 676 (1927).

38. Foster Packing Co. v. Haydel, 278 U.S. 1 (1928).

39. Toomer v. Witsell, 334 U.S. 385 (1948)

40. 39 STAT. 1702.

41. 49 STAT. 1555.

42. 16 U.S.C. §§ 701-15.

43. *See* United States v. Shauver, 214 F. 154 (E.D. Ark. 1914); United States v. McCullagh, 221 F. 288 (D. Kan. 1915).

44. 252 U.S. 416 (1920).

45. Id. at 434.

46. See, e.g., Bailey v. Holland, 126 F.2d 317 (4th Cir. 1942); United States v. Rockefeller, 260 F. 346 (D. Mont. 1919).

47. 252 U.S. at 433.

48. E.g., Bradenburg v. Doyle, 12 F. Supp. 342 (S.D. Ill. 1935).

49. E.g., Cerritas Gun Club v. Hall, 96 F.2d 620 (9th Cir. 1938).

50. But see Ried v. Covert, 354 U.S. 1 (1957) (Opinion of Jackson, J.); Powell v. Zuckert, 366 F.2d 634 (D.C. Cir. 1966).

51. License Cases, 46 U.S. (5 How.) 504, 583 (1847).

52. Bi-metallic Co. v. Colorado, 239 U.S. 441, 445 (1915).

53. E.g., Southern Ry. Co. v. Virginia, 290 U.S. 190 (1933).

54. MD. ANN. CODE art. 96A, § 15 (1957).

55. MD. ANN. CODE art. 96A, § 23(c) (1957).

56. Fuch, Procedure in Administrative Rule-making, 52 HARV. L. REV. 259 (1938).

57. Burns Baking Co. v. Bryan, 264 U.S. 504 (1924).

58. Weaver v. Palmer Bros., 270 U.S. 402 (1926).

59. Morehead v. New York, 298 U.S. 587 (1936).

60. New State Ice Co. v. Liebman, 285 U.S. 262 (1932).

61. Williamson v. Lee Optical Co., 348 U.S. 483, 488 (1955).

62. See MD. CONST., Declaration of Rights art. 23, art. III, § 40; VA. CONST. § 58.

63. VA. CONST § 58 (emphasis added).

64. Compare Swift & Co. v. Newport News, 105 Va. 108, 52 S.E. 821 (1906) with Anderson v. Stuarts Draft Water Co., 197 Va. 36, 87 S.E.2d 756 (1955); Note, Eminent Domain in Virginia, 43 VA. L. REV. 597 (1957).

65. 272 U.S. 365 (1926).

66. Gorieb v. Fox, 145 Va. 554, 134 S.E. 914 (1926).

67. Pocomoke City v. Standard Oil Co., 162 Md. 368, 159 A. 782 (1932) and compare Goldman v. Crowther, 147 Md. 282, 128 A. 50 (1925).

68. De Paul v. County Com. of Prince George's County, 237 Md. 221, 227, 205 A.2d 805, 808 (1965) (emphasis added).

69. Cities Service Co. v. County Com. of Prince George's County, 226 Md. 204, 214, 172 A.2d 523, 528 (1961).

70. West Bros. Brick Co. v. Alexandria, 169 Va. 271, 192 S.E. 881 (1937).

71. Dooley v. Town Zoning Commission of the Town of Fairfield, 151 Conn. 304, 197 A.2d 770 (1964).

72. Walls v. Midland Carbon Co., 254 U S. 300 (1920).

73. 52 OKLA. STAT. ANN. §§ 81-138, 231-287 (1941).

74. Patterson v. Sanolind Oil & Gas Co., 305 U.S. 376 (19

75. J. Sax, *Takings and the Police Power*, 74 YALE L. J. 36, 61 (1964).

76. II AMERICAN LAW OF PROPERTY § 8.110 (1952).

77. II AMERICAN LAW OF PROPERTY § 8.115 (1952).

78. *See* Linthicum v. Coan, 64 Md. 439, 2 A. 826 (1886).

79. Baltimore v. Appold, 42 Md. 442, 456 (1875) (non-navigable water).

80. Linthicum v. Coan, 64 Md. 439, 2 A. 826 (1886).

81. *See, e.g.*, St. Germain Irrig. Co. v. Hawthorne Ditch Co., 32 S.D. 269, 143 N.W. 124 (1913); Neilson v. Spooner, 46 Wash. 14, 89 Pac. 155 (1907); Clark v. Cambridge and Arapahoe Irrig. and Imp. Co., 45 Neb. 798, 64 N.W. 239 (1895); Mud Creek Irrig. Agric. and Mfg. Co. v. Vivian, 74 Tex. 170, 11 S.W. 1078 (1889); *but see* State *ex rel* Emery v. Knapp, 167 Kan. 546, 207 P. 2d 440 (1949).

82. Baltimore & O. R.R. v. Chase, 43 Md. 23, 35 (1875).

83. *See* the views collected in J. SAX, WATER LAW PLANNING & POLICY 215-17 (1968).

84. MD. ANN. CODE art. 96A, § 11 (1957). A similar statute passed constitutional muster in Kansas. *See* State *ex rel* Emery v. Knapp, 167 Kan. 546, 207 P.2d 440 (1949).

85. *See* Culley v. Hollis, 180 Md. 372, 25 A.2d 196 (1942) (dicta).

86. MD. LAWS ch. 9 (1745).

87. 1 Gill 430 at 501 (1844).

88. See, e.g., Baltimore v. Canton Co., 186 Md. 618, 47 A.2d 775 (1946).

89. Baltimore v. Canton Co., 186 Md. 618, 47 A.2d 775 (1946); Culley v. Hollis, 180 Md. 372, 25 A.2d 196 (1942); Garitee v. Baltimore, 53 Md. 422 (1880); Baltimore & O. R.R. v. Chase, 43 Md. 23 (1875).

90. 43 Md. 23, 35 (1875).

91. 53 Md. 422, 433 (1880).

92. 186 Md. 618, 625, 47 A.2d 775 (1946).

93. MD. ANN. CODE art. 96A, § 12 (1957).

94. 173 Md. 450, 455-58, 196 A. 305 (1938).

95. Mutual Chemical Co. v. Baltimore, 33 F. Supp. 881 (D. Md. 1940).

96. Baltimore v. Crown Cork and Seal Co., 122 F.2d 385 at 392 (4th Cir. 1941).

97. See Causey v. Gray, 250 Md. 380, 243 A.2d 575 (1968); Feudale v. Sarles, 190 Md. 244, 58 A.2d 248 (1948).

98. 146 Md. 384, 389, 126 A. 91 (1924).

99. 159 Md. 222, 226, 150 A. 455 (1930), affm'd. 282 U.S. 172 (1930).

100. Hite v. Town of Luray, 175 Va. 218, 226, 8 S.E.2d 369, 372 (1940).

101. Norfolk City v. Cooke, 27 Gratt. 430, 435 (1876).

102. 205 Va. 909, 140 S.E.2d 678 (1965).

103. Id.; Town of Pinesville v. Potts, 179 Va. 514, 19 S.E.2d 700 (1942) (taking of fresh water by municipality); Peek v. City of Hampton, 115 Va. 855, 80 S.E. 593 (1914) (construction of bridge adjacent to riparian land).

104. 248 F.2d 822 (4th Cir. 1957).

105. Id. at 825-26.

106. Id. at 827.

107. Id. at 828 n. 4.

108. Watson v. Maryland, 218 U.S. 173 (1910).

178-e

109. MD. ANN. CODE art. 66C, § 702(b) (1957).

110. *See, e.g.*, Wheeling Steel Corp. v. Glander, 337 U.S. 562 (1949) and Douglas's dissent therein.

111. See pp. 87-88, *supra*.

112. 118 U.S. 356 (1886).

113. *See* Reich, *The Law of the Planned Society*, 75 YALE L. J. 1227, 1234 (1966).

114. *Id*. at 1244-45.

115. 173 Md. 450, 196 A. 305 (1938).

116. *Id*. at 459, 196 A. at 309.

117. *See, e.g.*, Reich, *The Law of the Planned Society*, 75 YALE L. J. 1227, 1247 (1966).

118. 354 F.2d 608 (2d Cir. 1965).

119. 272 U.S. 365 (1926).

120. The power to zone in Maryland has been delegated through a complex series of statutes. Basically they are: MD. ANN. CODE art. 66B, §§ 1-9, 21-23 (1957) (general enabling statutes); MD. ANN. CODE art. 25B, § 5(x) (1957) (statute pertaining to charter counties).

121. *See* Heath v. Baltimore, 187 Md. 296, 305, 49 A.2d 799, 804 (1946).

122. MD. ANN. CODE art. 66B, §§ 1-9 (1957).

123. *See* Shapiro, *The Zoning Variance Power——Constructive in Theory, Destructive in Practice*, 29 MD. L. REV. 3 (1969).

124. Montgomery County v. Merlands Club, Inc. 202 Md. 279, 96 A.2d 261 (1953).

125 MacDonald v. Board of Commissioners for Prince George's County, 238 Md. 549, 210 A.2d 325, 328 (1965).

126. Huff v. Bd. of Zoning Appeals, 214 Md. 48, 133 A.2d 83 (1957).

127. *Compare* Eckes v. Bd. of Zoning Appeals, 209 Md. 432, 121 A.2d 299 (1956) *with* American Oil Co. v. Miller, 204 Md. 32, 102 A.2d 727 (1954).

128. *Validity of a Rezoning Ordinance in Maryland*, 13 MD. L. REV. 242, 247 (1953).

129. *See, e.g.*, Wakefield v. Kraft, 202 Md. 136, 96 A.2d 27 (1953).

130. *See, e.g.*, MD. ANN. CODE art. 66B, § 3 (1957).

131. 214 Md. 48, 133 A.2d 83 (1957).

132. 133 A.2d at 87.

133. *Id*. at 90.

134. *Id*. at 91.

135. *Compare* Rogers v. Village of Tarrytown, 302 N.Y. 115, 96 N.E.2d 731 (1951) *with* Eves v. Zoning Bd. of Adjust. of Lower Gwynedd Twp., 401 Pa. 211, 164 A.2d 7 (1960).

136. 223 Md. 24, 161 A.2d 824 (1960).

137. *See* Beall v. Montgomery County Council, 240 Md. 77, 212 A.2d 589 (1966).

138. 243 Md. 138, 220 A.2d 589, 595-96 (1966).

139. 248 Md. 386, 237 A.2d 53, 56 (1968).

140. Haar & Herring, *The Lower Gwynedd Township Case: Too Flexible Zoning or An Inflexible Judiciary*, 74 HARV. L. REV. 1552, 1563-64 (1961).

141. The Maryland counties bordering the Bay are: St. Mary's, Calvert, Anne Arundel, Baltimore, Harford, Cecil, Kent, Dorchester, Queen Anne's, Talbot, Wicomico, Somerset, Charles and Prince George's.

142. The tidewater city and counties of Virginia are set forth in VA. CODE ANN. § 28.1-2 (1950).

143. *See* MD. CONST. art. XI-A for the constitutional authority under which these charters were adopted.

144. *See* MD. CONST. art. XI for special provisions relating to the powers of Baltimore City.

145. *See* J. SPENCER, CONTEMPORARY LOCAL GOVERNMENT IN MARYLAND 25 (1966).

146. *See* MD. ANN. CODE art. 25 (1957).

147. *See* MD. ANN. CODE art. 25A (1957).

148. MD. CONST. art. XI-A, § 4.

149. *See* VA. CODE ANN. title 15.1 (1950).

150. VA. CODE ANN. § 62.1-132 (1950).

151. VA. CODE ANN. title 62.1, ch. 12 (1950).

152. 327 U.S. 546 (1946).

153. *Id*. at 551.

154. *Id*. at 556-57.

155. *Id*. at 557-58.

156. 263 U.S. 78 (1923).

157. Perellis v. Baltimore, 190 Md. 86, 57 A.2d 341 (1948).

158. Arnsperger v. Crawford, 101 Md. 247, 61 A. 413 (1905).

159. Herzinger v. Baltimore, 203 Md. 49, 60, 88 A.2d 87, 92 (1953).

160. Master Royalties Corp. v. Baltimore, 235 Md. 74, 200 A.2d 652 (1964).

161. VA. CONST. § 58.

162. *See, e.g.*, Rudee Inlet Auth. v. Bastian, 206 Va. 906, 147 S.E.2d 131 (1966).

163. *See, e.g.*, Fallsburg Power & Mfg. Co. v. Alexander, 101 Va. 98, 43 S.E. 194 (1902).

164. *E.g.*, Hunter v. Norfolk Redevelopment and Housing Authority, 195 Va. 326, 78 S.E.2d 893 (1953).

165. 206 Va. 906, 147 S.E.2d 131 (1966).

166. *See, e.g.*, *Techniques for Preserving Open Space*, 75 HARV. L. REV. 1622 (1962); W. WHYTE, OPEN SPACE ACTION 18 (1962).

167. MD. ANN. CODE art. 66C, § 357 (1957).

168. United States v. Smoot Sand and Gravel Corp., 248 F.2d 822 (4th Cir. 1957).

169. Marchant v. Baltimore, 146 Md. 513, 528, 126 A. 884 (1924).

170. Frankfurter & Landis, *The Compact Clause of the Constitution*, 34 YALE L. J. 685 (1925).

171. COUNCIL OF STATE GOVERNMENTS, INTERSTATE COMPACTS, 1783-1966, A COMPILATION (1966).

172. *See* U.S. CONST. art. I, § 10.

173. W. BARTON, INTERSTATE COMPACTS IN THE POLITICAL PROCESS (1965).

174. MARTIN, BIRKHEAD, BURKHEAD & MUNGER, RIVER BASIN ADMINISTRATION AND THE DELAWARE (1960).

175. MD. ANN. CODE art. 43, § 407 (1957).

176. MD. ACTS ch. 29 (1960).

177. POTOMAC RIVER BASIN COMPACT (Potomac River Basin Advisory Committee, Washington, D.C. 1968).

178. MD. ANN. CODE art. 66C, § 256 (1957).

179. BARTON, INTERSTATE COMPACTS IN THE POLITICAL PROCESS 22-23 (1965).

180. MD. ANN. CODE art. 66C, § 261A (1957).

181. MD. ANN. CODE art. 96A, § 59 (1957).

182. West Virginia *ex rel* Dyer v. Sims, 341 U.S. 22 (1951).

183. United States v. Tobin, 195 F. Supp. 588 (D.O.C. 1961).

184. Tobin v. United States, 306 F.2d 270 (D.C. Cir.), *cert. denied* 371 U.S. 902 (1962).

185. *See, e.g.*, Celler, *Congress, Compacts and Interstate Authorities*, 26 Law & Contemp. Probs. 682 (1961); 70 YALE L. J. 812 (1961); 75 YALE L. J. 1416 (1966).

186. Celler, *supra* note 185 makes a brief defense of the power of Congress to amend or repeal consent legislation, but as Congressman Celler was chairman of the subcommittee involved in the Tobin case, his is hardly an unbiased opinion.

187. Delaware River Joint Toll Bridge Comm. v. Colburn, 310 U.S. 419 (1940).

188. *See* Engdahl, *Construction of Interstate Compacts: A Questionable Federal Question*, 51 VA. L. R. 987 (1965).

189. *See* MD. ANN. CODE art. 96A, § 60 (1.4), § 71 (12.1) (1957).

190. *See* POTOMAC RIVER BASIN COMPACT §§ 1.05, 12.01 (Potomac River Basin Advisory Committee, Washington, D.C. 1968).

PART THREE:

CASE STUDIES

179-j

I.

WATER QUALITY MANAGEMENT

One of the most difficult areas for a layman to comprehend in the whole field of water resources management is the concept of water quality. Decisions about water quality influence and are influenced by almost all other areas of concern.

There seems to be a fairly popular misconception that water can be classified as either "clean" or "dirty," or as "polluted" or "not polluted." But water, like everything else, comes in varying degrees of quality, the extremes of which can be described as "pristine" and "grossly polluted." The only really "grossly polluted" waters in Maryland and Virginia are Baltimore Harbor, Hampton Roads and the Potomac River just below Washington, D.C.

Technicians dealing with water quality have a jargon for describing the quality of water, which ranges from such simple criteria as smell, taste, turbidity (whether the water is transparent, translucent, etc.), and color, to such arcane concepts as "BOD5" which is, perhaps, the most widely used current measure of water quality. BOD_5 stands for Five Day Biochemical Oxygen Demand, and it is a measure of the amount of oxygen that is required, during a five day period, to decompose by natural processes the wastes deposited in the water. The higher the BOD_5, the more polluted the water. A high BOD number indicates that there is either a large population of oxygen-absorbing micro-organisms present, or an extremely large quantity of decomposing wastes present, or both, since the micro-organisms help to decompose the wastes and grow prolifically when there are present large quantities of waste, on which they feed.

Another frequently used measure is dissolved oxygen (usually, the weight of oxygen in milligrams present in one liter of water). A low D.O. number indicates a high degree of pollution, as a polluted stream has more micro-organisms which use oxygen and thus there is less oxygen left in the water. It is generally agreed that a D.O. of at least 4 is necessary to preserve healthy fish life (although some species of fish can survive on less, and some commentators feel this might well be too low a figure).

Another indication of pollution is the colliform bacteria count, normally expressed in terms of individual bacteria present per 100 milliliters of water. A high colliform count indicates a high degree of pollution. Colliform bacteria naturally live in the intestines of mammals, and are part of the excreta of all mammals. While they are not in themselves harmful, they are a reliable indication of the presence of other, more harmful, bacteria. The colliform count is the oldest pollution measuring device, and as far as danger to human health is concerned, it is still regarded as relatively reliable. It is not, however, a reliable guide to the ability of fish or aquatic plants to live in the water, as there is not necessarily a relationship between colliform count and BOD or D.O. A stream can have a very low colliform count and still have a high BOD and low D.O., as the colliform and their associated bacteria are not the only matter that can grow in a stream.

Another figure sometimes used is pH. This is a straightforward chemical determination of the relative acidity of the water. Chemically pure distilled water has a pH of 7. The more acidic the water, the lower the pH to a minimum of 0; the more alkaline the water, the higher the pH, to a maximum of 14. For all practical purposes, the pH of a stream should be kept between 5.5 and 8.5, or nothing will be able to live and even these extremes should not exist for extended periods of time.

Temperature affords yet another measure of water quality. Although the effect of thermal additions to the water are not yet clearly understood, some undesirable side effects have been noted. The return of heated waters which have been used as industrial coolants to the Bay, may result in the death of oysters, crabs, and microscopic animals near the outfall.

According to all of these measuring devices, the water quality of the Chesapeake Bay as a whole is not particularly bad. In fact, it is generally considered to be the best preserved estuarine zone in the country. Compared with the only really geographically equivalent body of water, the San Francisco Bay, it is practically in a pristine state.[1]

It should also be realized that to restore the waters to their "natural" state would be absolutely impossible; the waters have not been in a "natural" state for at least the last ten thousand years---since the first Indians came to live along the shores. Certainly, if the clock could be turned back 100 years, we would find that the waters were "purer" than now, but it is doubtful that anyone would really prefer to live under the conditions prevailing at that time. What must be done is to guarantee that the natural water resources of the region are not completely destroyed by the developments of civilization.

Use of water for industrial purposes must not be allowed to take precedence over the use of the waters as a source of food and as a place for recreational activities. But although these latter uses must be protected, it is not necessary to eliminate all competing industrial uses. It is necessary to develop a structure that will allow the two types of uses to co-exist.

A. The Scope of the Problem

In considering water quality in Chesapeake Bay, attention cannot be restricted to the estuarine zone. The Bay is but a part of a larger hydrological system. Consumptive uses of fresh waters from the Bay's tributaries effect its level of salinity. Non-consumptive uses of such waters for sewage and industrial processes have an eventual impact on the quality of Bay waters. Conversely salt waters from the Bay can intrude into the aquifer layers and destroy valuable sources of ground waters. Hence problems of water quality relate and interrelate to the whole of the Chesapeake Bay's drainage basin.

According to a recent draft of a study made by the Department of Chesapeake Bay Affairs of Maryland, there is a great deal of progress being made at the moment in Maryland in the control of water pollution. Present municipal waste disposal plants discharging into the Bay manage to eliminate 80% of the BOD load of the wastes, and, within the next two years the figure will be between 85 and 90%.[2] These figures, based on studies by the State Health Department, which has control over all municipal sewage plants are, perhaps, somewhat overoptimistic. It appears that the individual cesspools, which are regulated by the County Health Departments, not by the State, lower these figures considerably.

According to another recent report, this one by the Maryland Department of Water Resources, however, the picture cannot be considered so rosey.[3] In a study of 378 industrial discharge points (the effluent of 359 plants, some having more than one outfall), 17% were found to be frequently or continuously in violation of the State water quality standards, 10% were found to have made occasional violations, and 5% were found to have made one immediately corrected violation. Thus 123 plants were found to have violated the water quality standards. 49% (185 plants) were considered to be in complete conformity with all of the regulations and standards. Another 19% (71 plants) were found to have been in conformity with the old regulations and standards, but not to be in conformity with the revised standards and regulations, and the Department was helping these plants with studies to secure compliance. This report, unfortunately, does not list the relative volume of the discharges so it is really impossible to determine how significant the violations are with respect to the overall stream quality. What we can be sure of is that the situation in Maryland is considerably better than the situation in Virginia, which is really only now starting to embark on an extensive water quality program.

The mere fact that these two separate reports were written is indicative of part of the problem. Both human sewage and industrial wastes contribute to the BOD load of the waters, but they are regulated and controlled separately---the first by the Health Department, the second by the Department of Water Resources. This same division of authority exists in Virginia.

A recent recommendation has been made by the Maryland Health Department to institute a state-wide "waste acceptance service" (WAS). Under this plan, the state would build treatment plants for both human and industrial wastes and would charge municipalities and companies for the service.[4]

B. Legal Structure

Traditionally water quality has been under the control of the health departments of the several states. In Maryland the State Board of Health was given (in 1914)[6] "general supervision and control over the waters of the State, in so far as their sanitary and physical condition affect the public health or comfort . . . "[7]

It is obvious from the wording of the section, however, that this statute was related exclusively to human health, and had no concern with the ability of aquatic life to survive. All that the health people could do in this respect is to make sure that the sea food taken out of the waters was safe for human consumption. If all the fish died because of the pollution, the health department was unable to do anything; it could act only if the fish continued to live but were rendered unfit for human consumption by the pollution.

After World War II it was realized that the concern with human health was not necessarily helping to protect the aquatic life of the waters of the country. Both the states[8] and the federal government[9] started to pass statutes designed to help protect aquatic life and stream quality. For example, a Maryland statute gave the Department of Water Resources various advisory and supervisory duties as to water quality and, among others, the power to "establish such reasonable water quality standards or criteria for any of the waters of the State."[10]

Many of the states, however, did not pass such statutes, and even in the states which had, progress was slow. Finally, after some intervening amendments, the basic present Federal Water Quality Act[11] was passed in 1965. Under this Act the control of water quality on the federal level was moved from the Department of Health, Education and Welfare to the Department of the Interior, where the Federal Water Pollution Control Administration was organized to enforce the Act.

The 1965 Act requires the states to adopt stream quality standards for all inter- and intrastate navigable water. These standards are subject to review by FWPCA, which can force changes in them or, in extreme cases, set them itself. This burr under the saddle has so far been effective as there is, at the date of writing (June, 1969) apparently only one state which has not adopted satisfactory standards.

Problems arise due to the divided responsibility that exists under the present state structures. In both Maryland and Virginia, as discussed above, although there are state water quality standards (in Virginia, administered by the State Water Control Board, and in Maryland, administered by the Department of Water Resources) the State Health Departments still have control over sewage disposal and drinking water supply.[12] In Maryland, the County Health Departments also have control over sewage. It is certainly duplicitous, if not irrational, to have such a system of joint control. It would be sufficient to give the health department control of the drinking water actually distributed to the public, and leave all other matters related to water quality in the hands of the water quality standards people. In this way, all matters that affect the quality of the waters would be under the control of one agency, and there would be no possibility of conflict (not to mention the economy of effort that would be achieved). It is recommended that the State Health Departments be taken out of the water quality field, and left in control of the areas of their direct concern---the quality of drinking water distributed to the public, and the edibility of the fish and shellfish distributed to the public for consumption. The questions of the conditions that result in these determinations, i.e., the quality of the water source, should all be coordinated in the water quality agency.

C. Alternate Methods of Control & Enforcement

There are many possible methods of regulating the quality of water in its natural state. The standards adopted pursuant to the federal goad are of a type generally designated "stream standards" or "receiving water standards. The Maryland regulations[13] may serve as explanatory examples.

These standards provide some general rules, such as prohibition of floating waste, sewage, oil, chemically toxic and corrosive materials, etc. They also provide for an absolute minimum D.O. and for maximum and minimum pH and temperature values. After the general rules, every body of water in the state is then put into one of three classifications, A, B or C.[14] A is the highest quality state of water and has stringent colliform, pH, D.O. and temperature standards. This water is good for all uses, including municipal water supply, fishing, etc. The B standards are somewhat lower, and the C standards lower still. By this classification scheme certain uses are protected in each type of water.

The problem arises as to how such stream standards are to be enforced. Let us suppose that a given stream is designated A, but that upon testing it is discovered that the D.O. is not as high as it should be. How is the D.O. to be restored to A quality?

The most obvious answer is to order those who are discharging waste into the stream to clean it up. This is relatively easy when there are only one or two dischargers, but what does one do when there are twenty or more? A method adopted by some states is to fine all of the dischargers a total amount, split among them on the basis of the quality and quantity of the effluent they are discharging. (Then it is up to each discharger to make the decision whether it is cheaper to continue to pay the fine or to build treatment facilities.)

Another technique used is to measure the quality of the effluent of each discharger and force each one to discharge an effluent of at least as high a quality as the stream standard. This certainly guarantees that the standard in the stream will be met. But it is also somewhat inefficient, because a body of water does have, through natural action, what is known as an assimilative capacity. This means that there is a certain amount of effluent of less than stream standard that can be put into the water without reducing the quality of the receiving water.

The second primary type of regulation, one that has been applied on the Delaware River, can be called an "assimilative assignment" system. In it studies are made to determine the assimilative capacity of the receiving body, and this capacity is split up among the dischargers. Anyone discharging more than his assigned capacity is subject to fine, injunction, etc. It is too soon to determine how successful this system will be, but the Delaware River Basin Commission seems to be optimistic.

The other two main methods of regulation are similar to the enforcement alternatives discussed with relation to stream standards. They are "effluent standards" and "effluent charges." An effluent standard system works exactly as its name implies. All dischargers are told that their effluent must be of a certain quality.[15] Obviously, if all discharges into the receiving body are of a certain quality, then the receiving water will be of a roughly similar quality (depending upon the proportion of total discharge volume to total water volume). This is similar to the second enforcement mechanism discussed in relation to stream standards. The effluent charge system is similar to the fine method discussed for stream standard enforcement, and has been used for over 50 years in the Rhur Valley in Germany. If a discharger desired to be hooked into a sewage system, he would pay charges based on the expense to the system of cleaning up his effluent. Why should the same system not work with respect to discharge into public water which serves, in such cases, as the sewer system? The problem to such a system of effluent charges is deciding upon proper charges and their apportionment. In theory the charge should just about equal, if not slightly exceed, the cost the discharger would incur if he were to clean up the effluent himself. On the Bay, for example, it might be proper to charge the Baltimore Gas & Electric Co. an amount equal (over, e.g., 15 years) to the cost of cooling towers, in exchange for which payments the Company would be allowed to discharge the thermally polluted effluent of its proposed Calvert Cliffs generating plant into the Bay.

The above discussion of systems and means of preserving or achieving water quality assumes that we are talking about concentrated effluent discharges as from a factory, city, or municipal sewage plant. In the Chesapeake Bay, however, a great deal of the pollution is the result of fertilizer and pesticides being washed off of surrounding farm land. Effective methods of controlling pollution of this sort have yet to be devised, although the experts are working on them.

D. Recommendations

1. In both Maryland and Virginia a comprehensive plan should be prepared for the development, utilization and management of the water resources of those portions of the Chesapeake Bay drainage basin within their respective boundaries.
2. In Maryland and Virginia respectively a single agency should be given exclusive authority to implement these water resources plans. Assuming the ratification of the proposed Susquehanna River Basin and Potomac River Basin Compacts, this recommendation will eventually lead to four agencies, each having exclusive jurisdiction over water resources in geographical portions of the Chesapeake Bay drainage basin.
3. The agencies charged with implementation of the water resources plans should be given authority to establish water quality standards and to bring enforcement actions against all discharges (including sewage) which interfere with them. The agencies should be given discretion to formulate methods of control and enforcement, by regulation. Although the Federal Water Pollution Control Act mandates that stream quality standards serve as a base, other methods (such as "assimilative assignments" or effluent charges) can serve as complements. The agencies should have the range of choice to consider these alternatives.
4. The agencies charged with implementation of the water resources plan should be given authority to build and operate any and all treatment and storage facilities and other projects as it finds necessary for regulation and control of state waters.

* Notes *

I. WATER QUALITY CONTROL

1. Compare SAN FRANCISCO BAY CONSERVATION & DEVELOPMENT COMMISSION, SAN FRANCISCO BAY PLAN SUPPLEMENT 25-42 (1969) with P. FARRAGUT, A RECONNAISSANCE STUDY OF THE CHESAPEAKE BAY 55-78 (Regional Planning Council, 1968).
2. J. Capper, Report on the Water Quality Status of Chesapeake Bay 11, June 3, 1969 (Md. Department of Chesapeake Bay Affairs).
3. Md. Department of Water Resources, Water Quality Status Report, February, 1969.
4. J. Capper, supra note 2 at 7.
5. MD. ANN. CODE art. 96A, §§ 15, 16 (1957).
6. MD. LAWS ch. 810 (1914).
7. MD. ANN. CODE art. 43, § 388 (1957).
8. MD. ANN. CODE art. 96A, § 23 (1957); VA. CODE ANN. §§ 62.1-14 to 62.1-44.1 (1950).
9. 62 Stat. 1155 (1948) extended by 66 Stat. 755 (1952).
10. MD. ANN. CODE art. 96A, § 23(c) (1957).
11. 33 U.S.C. § 466 (1965).
12. MD. ANN. CODE art. 43, § 388; VA. CODE ANN. §§ 62.1-31 to 62.1-44.1, 62.1-45 to 62.1-63 (1950)
13. MARYLAND DEPARTMENT OF WATER RESOURCES, WATER RESOURCES REGULATION 4.8 (as amended March 18, 1968).

14. The following chart summarizes the Maryland Water Quality Standards:

Class	A	B	C
Uses * -	I, III - VI	II - VI	III - VI
Colliform bacteria (max. per 100 ml.)	70	for water supply, 5000 for recreation, 240 - if more than 240, special survey required	if more than 240, special survey required
D.O. (mg/l)	for trout waters, min. 5.0, monthly average, 6.0; for all other waters, min. 4.0, monthly average, 5.0.		
pH	minimum 6.0 maximum 8.5	same as A	same as A
Temp. (°F) Tidal	If natural Temp. less than 50, max. raise is 20 & max. temp. is 60; If natural Temp. more than 50, max. raise is 10 & max. temp. is 90.		
Non-Tidal	If natural Temp. less than 50, same as Tidal. If natural Temp. more than 50, max. raise is 10 & max. temp. is 93.		

* I - shellfish cultivation; II - public water supply; III - water contact recreation; IV - propogation of fish and aquatic life; V - agricultural water supply; VI - industrial water supply.

15. Maryland uses this method as well as the stream standards. *See* Maryland Department of Water Resources, Water Resources Regulation 4.4.

II.

WITHDRAWALS AND DIVERSIONS

The extent of the Bay's salinity is determined by the inflow of fresh water from its tributaries. Bay waters are characterized by a two-layered system. Fresh water flows in a generally southerly direction on the surface and denser salt water flows in a generally northerly direction beneath the surface. A decrease in stream flow results in greater intrusions of salt water into the upper reaches of the Bay with a corresponding effect on the ecology.[1]

Greater demands on fresh water are already in prospect. The Susquehanna River (which contributes about 50% of the Bay's fresh water) is the least utilized water source in the northeast United States. At present its waters are used only by cities actually along the river (e.g., Binghamton, Scranton, Wilkes-Barre, Harrisburg, York and Lancaster) and by two cities outside the basin (Chester and Baltimore). But proposals have already been made that part of its flow be diverted to New York City, Philadelphia and Gettysburg. Furthermore, increased uses of its flow within the basin for industrial and sewage processes will result in some additional evaporation loss and changes in quality. Finally, salinity levels of the upper Bay are determined not only by inflow, but also by net outflow through the Chesapeake and Delaware Canal. The Canal is presently being deepened to 35 feet and there will be a corresponding increase in outflow.

Legal institutions have responded to the problem of regulating withdrawals and diversions in a variety of ways. Within their respective boundaries, Maryland and Virginia regulate uses of water. Virginia still clings to the riparian concept that the several owners of land abutting state waters are each entitled to make a reasonable use of the waters, and leaves to the courts the problem of determining what constitutes a "reasonable" use. In 1934 Maryland adopted an appropriations system which requires individuals seeking the use of fresh waters to first obtain a permit and in 1964 this procedure was extended to tidal waters.[2]

But the greater source of potential conflict appears to exist on an interstate level. The traditional mechanism for resolving disputes between the states has been the bringing of an original action in the United States Supreme Court. Disputes over uses of the Delaware River illustrate this mechanism. In 1931 New Jersey sought to enjoin New York from diverting any waters from the Delaware or its tributaries.[3] New Jersey alleged that the proposed diversion would deprive its citizens of their riparian rights to an undiminished flow of the stream, and would interfere with navigation, development of water power and municipal water supply, recreation, and the fishery of Delaware Bay. Speaking for the court, Mr. Justice Holmes first scotched the notion that the laws of the respective states determine their right to the waters, and went on to describe the role of the Supreme Court, as follows:

> A river is more than an amenity, it is a treasure. It offers a necessity of life that must be rationed among those who have power over it. New York has the physical power to cut off all the water within its jurisdiction. But clearly the exercise of such a power to the destruction of the interest of lower States could not be tolerated. And on the other hand equally little could New Jersey be permitted to require New York to give up its power altogether in order that the River might come down to it undiminished. Both States have real and substantial interests in the River that must be reconciled as best they may be. The different traditions and practices in different parts of the country may lead to varying results, but the effort always is to secure an equitable apportionment without quibbling over formulas.[4]

The court then issued an order establishing, by way of a fixed and detailed mathematical formula, the correlative rights of New York and New Jersey. In 1954 New York sought and received an amendment to this formula from the Supreme Court.[5]

During the 1965 drought New York City, on the verge of running out of water, refused to comply with the specified minimum flow requirements of the formula. Rather than taking the dispute to the Supreme Court, the states brought it before the newly formed Delaware River Basin Commission. This compact commission did not simply divide the available water (as the Supreme Court had previously done), but instead sought to change the facts by reviewing existing data and seeking new water sources. The commission determined that the flow from New York could be reduced to some extent without salt water incursion into the Philadelphia water supply intake and that some additional water was available from privately-owned hydropower reservoirs. The commission accordingly modified the Supreme Court's decree.[6]

The Delaware River experience obviously has relevance to the Susquehanna River and Chesapeake Bay. It raises the question as to which is the more appropriate forum for the making of diversion decisions. Since at the time of this writing (June, 1969), the Susquehanna River Basin Compact has been approved by the legislatures of New York, Maryland and Pennsylvania, and needs only Congressional approval to take effect, the question is raised as to whether diversion decisions should be made by the compact commission or left with the United States Supreme Court.

Professor Joseph Sax has stated the relative advantages of compact decision-making as follows:

> Courts find it terribly difficult to deal with a case where the question is how rights are to be resolved between New York and Philadelphia, and where in order to settle that issue it must look not only at the relative needs in the Delaware water as such, but also at the problems of the Hudson River, of metering, of saline water conversion, of wells, of the use of government and private reservoirs, and possibly of weather modification, of tapping the Great Lakes and damming Long Island Sound as well. In short, the pressures on courts are to simplify the facts and to reduce alternatives, whereas in terms of the ultimate public good what may be most needed is an institutional form which operates to generate more and more alternative solutions to

> a problem. Courts seek stability and certainty, but the New York water supply problem (and it is by no means unique) may most need just the opposite, that is, a kind of creative and dynamic instability in which the pressures are toward innovation and novelty and experimentation, rather than the complacency which may come with having a firm and enforceable legal right——which right has already come to terms with the underlying, conflicting and troublesome public interest.[7]

Conversely it must be recognized that the Susquehanna commission will be a political body composed of representatives from New York, Maryland, Pennsylvania and the federal government. As such, it appears well suited to representing the interests of the states and federal government in the formulation of a comprehensive water utilization plan for the Susquehanna Basin which will meet both the demands for drinking water and of the Chesapeake Bay. But if serious drought conditions recur, a potential conflict of interest is easily forseeable. New York and Pennsylvania would have a common interest in diverting Susquehanna waters to the Delaware Basin for municipal water supply purposes. Maryland alone would have an interest in seeing that Susquehanna waters flow into the Chesapeake Bay. Hence, Maryland is understandably fearful that in times of water shortage the commission might not be a sufficiently disinterested forum to determine the minimum fresh water requirements of the Chesapeake Bay ecosystem.

Actually the interests of the Chesapeake Bay are not as underrepresented as it might first appear. Although the compact empowers the commission to authorize "out-of-basin allocations, withdrawal and diversion"[8] under the compact's voting structure, this may be done only by a three-fourths vote of the signatories.[9] Hence a diversion to the Delaware Basin could be authorized only with the approval of the federal representative. Since the federal representative is appointed by and serves at the pleasure of the President of the United States,[10] the decision is ultimately that of the President's, if he chooses to make it.

Moreover, the Susquehanna compact (unlike the Delaware compact and the proposed Potomac compact) has explicitly reserved to the states the right to question the propriety of diversion in the United States Supreme Court. But the procedural setting of this review has been changed—the court is merely to review the record made before the commission, and the decision is to be affirmed unless the court finds that it is not supported by "substantial evidence."[11]

Doubts can be raised as to the advisability of having thus limited Supreme Court review of the substantive issues involved in the diversion of Susquehanna waters. In the absence of such review, final authority would be vested in the executive branch of the federal government, which is perhaps the most qualified, impartial legal institution available for making the decision. Since the Susquehanna River Basin Compact has already been negotiated and is nearing final approval, it is a bit late to re-raise this fundamental question. But accepting the principle of limited Supreme Court review, it would seem that the language of the compact is less than artfully drafted. Section 3.10-7 presently reads, in pertinent part, as follows:

> The action of the commission shall be affirmed, unless the court finds that it is not supported by substantial evidence.

Looking at diversion disputes in context, it would appear that there will almost invariably be substantial evidence in support of the need for the diversion. The need for water is easily demonstrated. If the review procedure is to be in any way meaningful, the Supreme Court should be directed to look to whether there is any substantial evidence in support of the balance of conflicting interests which the commission made in reaching the diversion decision.

Facing the broader problem of the water supply needs of the northeastern United States (of which Chesapeake Bay requirements are a small but integrally related part), fundamental doubts can be raised as to the efficacy of existing legal institutions. Neither the states nor the existing and proposed river basin compact commissions have the requisite jurisdictional breadth or legal authority to deal comprehensively with the problem. In this frame of reference the needs of the Chesapeake Bay interrelate with water metering practices in New York City. Federal administrative activity may eventually be necessary to make water allocation and management decisions on a regional basis.

Recommendations

1. In both Virginia and Maryland the agency charged with implementation of the water resources plan should be empowered to grant or deny permits for all withdrawals or diversions from state waters. The agency should be directed to only grant the permit if the proposed withdrawal or diversion is consistent with the water resources plan. In addition, the agency should be given discretion to charge users of the waters if it feels such a charge is justifiable.
2. The last sentence of Section 3.10-7 of the Susquehanna River Basin Compact be amended to read as follows:

   > The action of the commission shall be affirmed, unless the court finds on the basis of substantial evidence that it is not fair to all signatory parties.

   This would retain the presumption of the correctness of the commission's diversion decisions, but would permit Supreme Court review of whether the fresh water needs of the Chesapeake Bay have been given fair consideration.

* Notes *

DIVERSIONS

1. See generally D. PRICHARD, CHEMICAL AND PHYSICAL OCEANOGRAPHY OF THE BAY, PROCEEDINGS OF THE GOVERNOR'S CONFERENCE ON CHESAPEAKE BAY II-49 through II-74 (Maryland, 1968).
2. MD. ANN. CODE art. 96A, §§ 2, 10, 11 (1957).
3. New Jersey v. New York, 283 U.S. 336 (1931).
4. Id. at 342-43.
5. New Jersey v. New York, 347 U.S. 995 (1954).
6. See J. SAX, WATER LAW, PLANNING & POLICY 151-78 (1968).
7. Id. at 179.
8. SUSQUEHANNA RIVER BASIN COMPACT §§ 3.8(b), 3.10-2(ii) (hereinafter SRBC); the Compact is reprinted in MD. ANN. CODE art. 96A, §§ 59-74 (1957).
9. S.R.B.C. §§ 2.5, 3.10-2(ii).
10. S.R.B.C. § 2.2.
11. S.R.B.C. § 3.10-7.

III.

OFFSHORE CONSTRUCTION: STRUCTURES, ARTIFICIAL FILL, SHORE EROSION CONTROL

In the eighteenth and nineteenth centuries tidewater residents built landings or piers which afforded access to the Chesapeake Bay's fishery and transportation systems. Today, increased human demands on the Bay create pressures for more sophisticated offshore construction projects. Changes in the shipping industry have led to the construction of complex marine terminals at Baltimore and Hampton Roads, both of which are under constant pressure to expand and improve their facilities. The scarcity of land has caused the filling of marshlands for the construction of marinas, housing developments and trailer parks. The increased value of real estate has generated efforts to combat shore erosion through the construction of bulkheads and jetties. And on the drawing boards are proposals for the construction of offshore skyscrapers and floating airports.

Maryland and Virginia have a direct proprietary stake in these projects, since much of the construction takes place on land presumably owned by the states (below mean high tide in Maryland, below mean low tide in Virginia).[1] When the town of Baltimore was incorporated in 1745, the Maryland General Assembly provided that "all improvements, of what kind so ever, either wharfs, houses or other buildings, that have or shall be made out of the water, or where it usually flows shall (as an encouragement to such improvers,) be forever deemed the right, title and inheritance of such improver. . . ."[2] Notwithstanding the dramatic changes in the nature of offshore construction projects, this philosophy still pervades the law of both Maryland and Virginia. Through the creation of a variety of common law and statutory riparian rights, the states have effectively abdicated many of their proprietary rights in favor of private owners of land abutting the Bay.[3] Consequently, there has been a trend towards the single-purpose development of Bay shoreline, based on the immediate economic advantage of the private owner, with little consideration for planning the optimum use of the whole Bay or for assuring the states a fair return for the land they are losing.

Federal, state and local governments, in the exercise of their regulatory powers, have placed some restraints on offshore construction. These regulations relate almost exclusively to the protection of navigation. To expedite implementation of the regulations the Army Corps of Engineers (the federal operative) and some state and local agencies have established and surveyed lines beyond which piers and bulkheads may not be extended.

A. Structures

In order to build a structure in navigable waters a permit must be obtained from the Army Corps of Engineers.[4] In Maryland waters a permit must also be obtained from the Department of Water Resources.[5] In addition the Maryland Port Authority[6] and local governmental bodies have regulatory powers. In Virginia circuit courts of the various counties and local governmental bodies are given power to abate offshore projects if they obstruct navigation.[7]

Although regulatory apparatus protects navigation interests on an ad hoc basis, it appears too scattered to plan effectively for the maritime development of the Bay. Furthermore, the regulatory powers given these agencies may not be broad enough to permit them to take ecological, water quality, and land planning considerations into account in determining whether to permit offshore construction. In a recent federal district case it was decided that the Army Corps of Engineers did not have statutory authority to take account of ecological factors in determining whether to grant a permit.[8] The authority of the state and local regulatory agencies have not been tested but may suffer from some similar limitations.

B. Artificial Fill

From the impetus of the San Francisco Bay experience (where artificial filling has shrunk that Bay from about 680 square miles to little more than 400)[9] a great deal of attention has been directed towards controlling of fill. In the larger and deeper Chesapeake Bay, filling has not been nearly as extensive. No Virginia statistics have been found, but tentative findings of the Maryland Department of Game and Inland Fish (made as part of the state's study of wetlands which is in progress) indicate the following:

> Maryland has a present total of 321,000 acres of salt and fresh-water wetlands and marsh. This present total acreage represents an estimated loss of 24,000 acres from that believed to have existed at the time of earlier inventories.
>
> Preliminary findings of the Wetland Study indicate that 121,000 acres of wetland affected regularly by the tide are found in Maryland, while 106,000 acres of salt marsh not regularly affected by tide are found in the State. Within these two categories, 6,800 acres of the former have been destroyed as compared with 2,500 acres of the latter.
>
> Submerged land or bottom measures to a 6 foot depth totals 466,500 acres for the Chesapeake Bay area. Of this total, an estimated 10,900 acres has been destroyed by covering the bottom lands with spoil dredged up in undertaking various navigation improvement projects. Most of this spoil loss has occurred in the Baltimore metropolitan portion of the Chesapeake Bay.[10]

Concern over the haphazard filling of Chesapeake Bay is not misplaced. Although it is technologically possible to fill anywhere on the Bay's bottom, great pressures exist for filling where it is cheapest——in the tidal and non-tidal salt marshes. These "wetlands" play a vital role in the Bay's ecology. They produce micro-organisms and other foods upon which finfish, shellfish and crabs are dependent; they provide a habitat for wildlife, particularly migratory water fowl and fur bearers, and are a key area for fish spawning. Hence, indiscriminate filling could seriously disrupt the Bay's ecology.

Since some filling is a necessary concomitant to man's effective use of the Bay, it would appear that an effective mechanism is needed to take into account both the utility and ecological effects of a proposed fill before deciding if it should be permitted. Unfortunately existing legal institutions do not provide such a mechanism.

The extent to which individuals have a right to fill is obscured by problems of applying the real property title system to shorefront land. As previously detailed, the State of Maryland is presumed to own all submerged land up to mean high tide and the State of Virginia is presumed to own all submerged land up to mean low tide. The presumption of state ownership may be rebutted by private individuals who can establish a valid grant from the state of submerged land.[11] There is no accessible data as to the extent such private grants are outstanding, but of late few private rights have been asserted thereunder.

Applying these theorems to areas of potential fill it appears that in both Maryland and Virginia the state is presumed to own the submerged bottom, and the private owners of land abutting the Bay are presumed to own wetlands not regularly inundated by the tide. In Virginia, private land owners presumably own abutting wetlands inundated by the tide, but in Maryland the state is presumably the owner. This Maryland rule raises the question (which has never been resolved) of how much tidal action is necessary to place an area of marshland below mean high tide.

Both Maryland and Virginia have further complicated the problem with statutes that ostensibly give the owners of land abutting navigable waters the right to fill offshore lands (owned by the states) and thereby to acquire private ownership.[12] The statutory right of Virginia riparian owners to fill state tidal land has engendered no apparent controversy, probably because Virginia riparians already own the marshlands down to the low tide mark. But the statutory right of the Maryland riparian owner to fill has set the stage for a continuing public dispute.

The focus of the dispute has related not to the Chesapeake Bay estuarine zone, but to tidal wetlands in Assawoman Bay (near Ocean City, Maryland), which a riparian land owner has filled and is now selling as residential lots. In 1965 the Maryland Attorney General ruled that the statutes, which seemingly give the riparian an unlimited right to fill, permit filling only to the extent necessary to protect shoreline and to enhance access.[13] As previously analyzed in detail the soundness of this ruling is extremely suspect.[14] But instead of judicially testing the ruling, the riparian land owner in that case entered into negotiations with the Board of Public Works and acquired the wetlands.

As an aftermath to this transaction, the Board formulated the following policy on the filling of tidal wetlands:

> 1 The applicant will agree to pay to the State of Maryland 10¢ (or present market value) per ton (dry weight) for fill material dredged from the bottom of navigable waterways beyond any approved bulkhead line or pre-1862 land grant line.
>
> 2 In exchange for a quit-claim deed from the State of Maryland the land lying between the mean high water or pre-1862 land grant line and the bulkheads to be constructed, the applicant or its nominee will convey to the State of Maryland marshland of equal ecological value and of a kind and location acceptable to the Board of Natural Resources on an approximate ratio of 2 acres of such marshland for every 1 acre of land deeded (to the applicant) by the State of Maryland.
>
> 3 The applicant will provide a surety bond to the State in an amount equal to the estimated payments to be made to the State. If the Board of Public Works has no objections to the applicant's request for the permits, and if the applicant agrees to all conditions imposed by the State, then the Board of Public Works shall notify, in writing, the Corps of Engineers and the Department of Water Resources. The applicant's project will be under the direct supervision of the Department of Water Resources, who have developed a specific method of measuring material dredged from the State-owned wetlands.[15]

Pursuant to this policy, in December of 1968 the state quitclaimed the wetlands to a riparian except that the 2-for-1 requirement was waived and in its stead was placed a charge of $100 per acre. But in June of 1969, when the news media discovered that this riparian was selling the filled wetlands (for which he paid $300,000 for fill dredged from Assawoman Bay in addition to the $100 per acre) as 2,000 lots for prices from $4,000 to $8,000 each, the resulting public furor led the Board to impose a moratorium on any more transactions of this kind.[16]

The experience clearly points up the deficiencies of the state's policy on the filling of wetlands. First, the correlative rights of the state and riparians to tidal wetlands are in doubt. Legislation which clearly reasserted the state's rights to these lands was introduced in the 1969 session of the Maryland General Assembly, but was not passed. Second, the requirement that the private land owner transfer to the state two acres of marshland (of equal ecological value) for every one he fills, is ambiguous. Since the state presumably owns all marshlands inundated by the tide, it appears that typically the private land owner will not own (or have a means of acquiring) similar marshland, to swap. Does the requirement mean that the private land owner is to transfer non-tidal wetlands that he owns, or merely to quitclaim whatever rights he might have in tidal wetlands in front of other fast land he owns? Third, the policy does not assure that the state will receive a fair return for wetlands transferred. And fourth, the policy does not provide a mechanism for comprehensive planning of where filling should be permitted.

C. Shore Erosion Control

The filling in of bays is a natural process. Erosion, the basic geological mechanism, is simply the washing away of the shore by passing water. Soil eroded from one part of the shoreline tends to move in the same direction at all times and is eventually deposited either on the bottom or further down the shore. This phenomenon is referred to as "littoral drift."[17]

Erosion presents two basic problems. First and most obvious, it destroys valuable land. Since Maryland was founded some 145 square miles of land have been lost to the Bay. The average net loss of shorefront land is 0.14 acres, per mile, per year.[18] Second, eroded material is deposited in dredged shipping channels, thereby increasing the cost of keeping the channels open.

Shore erosion control structures may be built either parallel or perpendicular to the shore. Parallel structures are referred to as seawalls or bulkheads and are built either with a few feet of water at their base or slightly above the waterline to stabilize and protect the beach. It is important that these defensive structures be made long enough (length determined by the physiographic characteristics of the shoreline) or else waves will "outflank" and destroy them from behind.[19]

Perpendicular structures, referred to as groins or jetties, are used in aggressive attempts to develop the shore by intercepting littoral drift. If properly engineered and constructed, they can be effective, but since they directly interfere with the littoral system they may starve down-drift shoreline.[20]

Surprisingly, in many areas the most effective and least expensive form of erosion control has been found to be "beach nourishment." As the name suggests, this merely involves adding new sand to the beach.[21]

Legal institutions have responded to the problems engendered by shore erosion in a variety of ways. Perhaps the earliest response was the common law doctrine of accretion, still followed in Maryland and Virginia today. Under this doctrine the owners of private land abutting the Bay are entitled to increases in their fast land, but lose their property rights in all lands which through the process of erosion become submerged (at mean high tide in Maryland, at mean low tide in Virginia). This doctrine has the beneficial effect of automatically adjusting land titles on the dynamic shoreline.

Statutes in both Maryland and Virginia authorize riparian land owners to build shore erosion control structures in front of their land on state-owned tidal bottom. Piecemeal construction of such projects almost invariably has some detrimental effect on neighboring and down-drift shoreline. However, since existing regulatory and permit procedures are apparently designed primarily to protect navigation, injured parties are left only with the generally unsatisfactory remedy for nuisance.[22]

Maryland statutes also authorize a more direct state involvement in shore erosion control. The Department of Chesapeake Bay Affairs is given power to enter into agreements with private parties, municipalities or counties for the cooperative erection of shore erosion control devices and to bear up to 50% of the cost.[23] While the wisdom of a state subsidy to private parties can be questioned on a cost-benefit basis, the more fundamental criticism of this procedure is that it holds out a promise that the state does not have the financial means to fulfill. It has been estimated that it costs almost $60.00 to provide a bulkhead which will protect one linear foot of shorefront property for 35-40 years.[24] During fiscal 1969 the Department of Chesapeake Bay Affairs received $351,000 for shore erosion control. If all of this were used for bulkheading on a 50% matching basis, approximately 2.2 miles of protection could be financed. About 2,000 miles of Maryland Chesapeake Bay shoreline has a significant erosion problem.

Federal legislation authorizes the Army Corps of Engineers to construct and pay up to 50% of the costs of shore erosion control projects.[25] Unfortunately this program has marginal utility for the Bay since it is primarily designed to protect publicly owned shoreline and most of the Bay's shoreline is privately owned.

D. Recommendations

1. In both Maryland and Virginia a comprehensive plan should be prepared for the utilization of the Bay's shoreline and submerged lands within their respective boundaries.
2. In Maryland and Virginia respectively a single agency should be given exclusive authority to implement this bay plan. This recommendation will require the consolidation of regulatory powers which are presently scattered throughout the states' regulatory apparatus.
3. The agencies charged with implementation of the bay plans should be empowered to grant or deny permits for all construction or filling on lands below the mean high watermark (regardless of whether the land is state-owned or privately owned). The agency should be directed to only grant the permit if the proposed project is consistent with the bay plan. In addition, the agency should be directed to consider potential effects of the project on navigation, water quality, aquatic life, economic development, bottom and shoreline configuration, and other potential effects on the environment, to consider the project from a safety and engineering perspective, and to only grant the permit if in light of these considerations it deems the project in the best interests of the state.
4. In both Maryland and Virginia the director of the agency (who will be responsible and responsive to the Governor) should be designated as trustee of the states' interest in submerged tidal lands. Anyone who has received a permit to engage in a project which will require the use of state lands should be required to negotiate a price with the director. The director should be given discretion in the determination of such price, but his decision should be held open to public scrutiny before becoming final.

5. The statutory rights of riparian land owners should be modified so that riparians will no longer have an ostensibly unlimited right to build and fill on state-owned submerged lands. Instead riparians should be given a right to build or fill on state-owned lands only to the extent necessary to protect their existing land or to provide access to navigable waters. Exercises of this right should be subject to the regulatory power of the agency set forth in Recommendation # 3, but out of historical and constitutional concern riparians should be permitted to exercise these rights without paying any consideration to the state.
6. The agency should be given power to finance the construction of shore erosion control devices, but only to the extent it finds such expenditures will inure to the public benefit.

* Notes *

OFFSHORE CONSTRUCTION: STRUCTURES, ARTIFICIAL FILL, SHORE EROSION CONTROL

1. *See* pp. 84-85, *supra*.
2. MD. LAWS ch. 9 (1745).
3. *See* pp. 95-106, 112-14, *supra*.
4. 33 U.S.C. § 403 (1964).
5. MD. ANN. CODE art. 96A, § 12 (1957).
6. MD. ANN. CODE art. 62B, § 5(q) (1957).
7. VA. CODE ANN. § 62.1-164 (1950).
8. Zabel v. Tabb, No. 67-200 Civ. T., M.D. Fla. 1969.
9. SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION, SAN FRANCISCO BAY PLAN 2 (1969).
10. R. August, Maryland's Wetlands, Marshes and Submerged Lands in the Context of Common and Statutory Law 8-9, October 1968 (prepared for Maryland State Planning Department).
11. *See* pp. 90-95, *supra*.
12. *See* pp. 95-106, 112-14, *supra*.
13. 50 Op. Md. Att'y. Gen., 452, 458-71 (1965).
14. *See* pp. 99-101, *supra*.
15. R. August, *supra* note 10 at 11.
16. *See* Oishi, *State Panel Bans Trading of Wetlands*, Baltimore Morning Sun, June 5, 1969 at C22, col. 8; Baltimore Morning Sun, June 5, 1969 at C6, col. 7.
17. *See* W. BASCOM, WAVES AND BEACHES 215-35 (1964).
18. T. SLAUGHTER, SHORE EROSION IN TIDEWATER MARYLAND 20-23, 54-63 (Department of Geology, Mines and Water Resources, Bull. No. 6 1949).

19. Id. at 7.

20. See W. BASCOM, WAVES AND BEACHES 232-35 (1964).

21. Id. at 234.

22. See p. 118, supra.

23. MD. ANN. CODE art. 66C, §§ 756-58 (1957).

24. Interview with T.H. Slaughter, Chief of Erosion Section, Maryland Geological Survey, November 27, 1968.

25. 33 U.S.C. § 426(e) (1964).

IV.

SHORELINE UTILIZATION

Shore lands are the jumping-off place for utilization of most Chesapeake Bay resources. Accordingly, the public is interested in how such lands are developed and managed. These interests can be catalogued in general terms. First, public access to the Bay should be provided to the maximum possible extent. Without a view the beauty of the Bay cannot be appreciated, and without entry its resources cannot be utilized. Second, prime shoreline sites should be reserved or conserved for preferred uses---ports, water-related industries, water-related recreation and salt marshes. If adequate land is not reserved for port and industrial development, the Chesapeake Bay region will not develop to its full economic potential; if sites are not provided, the recreational values of the Bay will remain unused; if salt marshes are indiscriminately filled, the Bay's ecosystem may be disrupted. Third, shore lands that are not needed for preferred uses should be developed in a manner that does not adversely effect the Bay.

Land use control has traditionally been a prerogative of local government. In some rural areas of Maryland and Virginia these powers go unexercised. The more populous cities and counties have exercised these powers through zoning, building restriction and, to a lesser extent, subdivision controls mandating the layout of streets, sewage connection and similar requirements. In light of the parochial interests of these local governments, it is not surprising that the restrictions imposed have evidenced little concern with the particular problems resulting from the interrelationship between the Bay and its shoreline.

The absence of effective public control has left decisions as to the development of shore lands to the market mechanism---land owners have developed their land according to their own determinations of economic advantage. The public goal outlined above has not fared well in this marketplace.

People have limited access to the Bay despite the fact that its physiographic configuration provides over 4,500 miles of nooked and crannied shoreline. This is well illustrated by a recent study of shoreline utilization in the Baltimore metropolitan region which found there to be a dearth of access between the mouth of the Susquehanna and the southern tip of Anne Arundel County.[1]

This absence is a product of several factors. The bulk of the land north of Baltimore is in the hands of two large land owners---the federal government (Aberdeen Proving Grounds and Edgewood Arsenal) and Martin-Marietta Company. Vista points in Baltimore are limited and the harbor itself is too polluted for recreational use. The shore frontage in Anne Arundel County is characterized by single-family dwellings directly along the shoreline which effectively cuts off the general public or those owning interior parcels from the water.

The present system has also failed to insure that prime shoreline sites are reserved for future priority uses. Both Maryland and Virginia do have port authorities with the powers necessary to develop port facilities.[2] These authorities have worked effectively to keep the ports of Baltimore and Hampton Roads in competitive positions. But there is no similar mechanism for reserving sites for water-related industry. Industries requiring frontage on navigable waters to receive raw materials and to distribute finished products by ship are vital to the region's economy. Land suitable for such industries will in the not distant future be scarce unless steps are taken to guarantee its availability. Nor have adequate water-related recreational facilities been provided. In the Baltimore metropolitan region, for example, only a handfull of public beaches exist and there is a shortage of marina space.[3] Local governments appear to have come to a realization of the need for such facilities but rising prices make it increasingly difficult to justify public acquisition and construction. Finally, non-tidal salt marshes are being "reclaimed" without any meaningful public review of the effect of the filling on the Bay's ecology or the wildlife which the marshes support. In Maryland approximately 2,500 acres of such lands have already been destroyed.[4]

Moreover, regulation of the use of shore lands is presently inadequate to preclude deleterious side effects on the Bay. Construction of subdivisions and roads greatly increases the sediment load on state waters which in turn interferes with water quality standards and fills shipping channels. A 1964 report indicates that in certain areas 1,000 to 3,700 tons of sediment per 1,000 additional people resulted from such development.[5] The amount of silt produced could be significantly reduced through changes in construction practices. Each year many of the few public and commercial beaches which do exist have to be closed due to pollution. Leaking septic tanks are a major contributor of pollutants.[6] This again highlights the basic inefficiency of the characteristic pattern of residential development. The building of single-family dwellings directly along the shoreline with little or no development of interior parcels not only limits the number of people who can enjoy the Bay, but it also contributes to pollution since it makes it prohibitively expensive to finance sewage lines on the traditional "user-pays" basis. These illustrations not only point up the need for more rigorous enforcement of existing water quality standards, but they also suggest a need for additional regulation of the development of land. Controls are needed over construction practices and to require sewage hook-ups.

Recommendations

1. In both Maryland and Virginia the agency charged with implementation of the water resources plan should be delegated power to regulate construction activities which may result in the disposition of silt in state waters. In the exercise of this police power the agencies will be able to require construction practices which will minimize soil erosion and the resulting sediment load.
2. In both Maryland and Virginia the agency charged with implementation of the bay plan should be given power to regulate the use of shore lands in the tidal region. The tidal region should be defined to include all lands either one hundred feet above sea level or less, or within one mile of tidal waters. The agency should be given discretion to designate all or any portion of these lands as areas of limited development. Development of lands so designated should be subject to special regulatory procedures. The special regulations should derive either from land use controls imposed by local governments and approved by the agency or, failing that, from the agency itself. The potential breadth of these land use controls should be as broad as the police power and they might take the form of zoning, subdivision controls, and permit procedures. They might be used to reserve land for water-related industry, to limit the filling of non-tidal salt marshes, to require that new residential subdivisions maximize access to tidal waters and are hooked into sewage systems, and to impose other strictures on development that are necessary to implement the bay plan.
3. These agencies should also be empowered to acquire (through condemnation if necessary) and operate public facilities in the tidal region. The power of condemnation should be broad enough to justify not only the acquisition of fee simple interests, but of development rights and scenic easements as well.

4. These agencies should be empowered to contribute towards the financing of other facilities in the tidal region. This power could be used, for example, to aid local governments in the acquisition of public recreational facilities and in the development of better sewage treatment facilities.

* Notes *

SHORELINE UTILIZATION

1. P. FARRAGUT, CHESAPEAKE BAY: SHORELINE UTILIZATION IN THE BALTIMORE REGION 3, 4 (Regional Planning Council, 1969).
2. *See* MD. ANN. CODE art. 62B (1957); VA. CODE ANN. §§ 62.1-128 to 62.1-147 (1950).
3. *See* P. FARRAGUT, *supra* note 1.
4. R. August, Maryland's Wetlands, Marshes and Submerged Lands in the Context of Common and Statutory Law 8-9, October 1968 (prepared for Maryland State Planning Department)
5. G. WOLMAN, PROBLEMS POSED BY SEDIMENT DERIVED FROM CONSTRUCTION ACTIVITIES IN MARYLAND iii (Maryland Water Pollution Control Commission, 1964).
6. P. FARRAGUT, A RECONNAISSANCE STUDY OF THE CHESAPEAKE BAY 60-61, 65-66 (Regional Planning Council, 1968).

V.

DREDGING AND DUMPING

Materials taken from the bottom of Chesapeake Bay are both assets and liabilities. Sand, gravel and shells have commercial value. The mineral potential of the Bay's bottom awaits the development of technology which can efficiently reclaim it. Bottom material is used as fill, incident to landfill projects, but the deepening of ship channels produces spoil which is generally unsuitable for fill, yet which must be removed.

The governments of the United States, Maryland and Virginia all have a direct interest in these activities. Under its commerce powers, the federal government has assumed primary responsibility for maintaining and enhancing navigation through the dredging and deepening of ship channels.[1] Maryland and Virginia, since they presumptively own the tidal bottom, have a proprietary stake in materials taken from the bottom.[2]

The three governments also have regulatory interests. Bottom material is most often taken through the use of mechanical dredges. The federal government is concerned with assuring that dredging activities do not obstruct navigation. The state governments are interested in seeing that dredging activities and the disposal of spoil do not disrupt other uses of the Bay. Mechanical dredges are not only a blight on the Bay-scape and an annoyance to nearby land owners, but they create turbidity in surrounding waters which impedes recreational uses and can be harmful to marine life.[3]

Even more acute is the problem of disposing of the 1.5 to 2 million cubic yards of spoil which are produced annually from ship channel dredging, without degrading marine life.[4] Most of this material is dredged from the bottom of

Baltimore Harbor and in the past has been dumped in other portions of the Bay. For twenty odd years a deep part of the Bay off Kent Island has been the major dumping grounds. Since much of this spoil is contaminated by industrial wastes, dumping presents a significant water quality hazard. In response to this problem the Maryland General Assembly appropriated $13,000,000 for construction of a containment area in a shallow area of the Bay near the Harbor. The spoil will be dumped behind dikes and eventually will form an island.[5]

There is a surfeit of legislation affecting the taking and disposal of bottom material. Statutes in Maryland and Virginia give some riparian land owners the right to take offshore deposits without paying any royalties to the states.[6] In addition, Maryland has three separate statutory procedures through which the state may sell bottom material,[7] and Virginia has one such procedure.[8]

The United States, Maryland and Virginia also have regulatory procedures which limit the taking of bottom material. The Army Corps of Engineers (the federal operative) is charged with reviewing dredging activities to assure that they will not impede navigation.[9] In Maryland permits may be required from the Department of Chesapeake Bay Affairs and/or the Department of Water Resources;[10] in Virginia a permit may be required from the Marine Resources Commission.[11]

Innumerable problems emerge from this disintegrated mass of legislation. The jurisdictional breadth and substantive scope of the statutes creating riparian rights are unclear. In Maryland the Attorney General has ruled that the statute creates rights only to take sand, gravel and other materials (suitable for commercial use) and not to the generality of bottom material, and that these rights rest solely with owners of land abutting "rivers, creeks and branches"— not bays. This ruling, although suspect, has never been judicially challenged.[12] The syntax of the Virginia statute leaves in question whether the riparian is entitled to take any sand and gravel in front of his land, or only deposits which extend "uninterruptedly from the low-tide mark."[13] More fundamentally, there appear to be no satisfactory reasons why the states should give away their interests in valuable deposits to private parties.

Each of the three Maryland procedures through which the state can sell its interest in bottom material has its own limitations and idiocrasies. Under two of these procedures, the Board of Public Works is the state salesman; under the third, the Board of Natural Resources serves in this capacity. The procedures apply variously to "[a]ny real property . . . of the state of Maryland . . . ", "sand, gravel or other material", and "minerals or rare earth."[14] In short, they reflect a series of piecemeal responses rather than a congruous package. The Virginia statutes provide no mechanism for establishing priority between the rights of those who have acquired an interest in bottom material and the rights of riparian land owners.[15]

According to a recent decision of a Federal District Court, the Army Corps of Engineers may consider only the effect of dredging on navigation in determining whether to grant a permit.[16] Maryland's Department of Chesapeake Bay Affairs is given unlimited authority to determine whether the taking is in the "best interests of the State" but its jurisdiction is limited to "public lands under the public navigable waters of the Chesapeake Bay (not including tributaries and estuaries of the Bay) . . . ."[17] Maryland's Department of Water Resources is given jurisdiction over all waters of the state, but is authorized only to regulate activities which "change or diminish the course, current, or cross-section" of the bottom.[18] Virginia's Marine Resources Commission is given authority to regulate takings of materials from the beds of tidal waters, but dredging by a riparian owner incident to filling of the front of his property is exempted.[19]

Recommendations

1. In Maryland and Virginia respectively, a single agency should be given exclusive authority to regulate the taking of any materials, or dumping, on submerged lands. The agency should be empowered to grant or deny permits for such activities and should be directed to only grant the permit if the proposed activity is consistent with the comprehensive bay plan. In addition, the agency should be directed to consider the potential effect of the activity on navigation, water quality, aquatic life, economic development, bottom and shoreline configuration and other potential effects on the environment, and to only grant the permit if it deems the activity in the best interests of the state.
2. In both Maryland and Virginia the statutes giving riparian owners the right to take sand and gravel without paying the states a royalty should be repealed. There appears no reason why the states should transfer valuable assets without receiving a fair return.
3. In both Maryland and Virginia the director of the agency with these regulatory powers should be designated as trustee of the states' interest in submerged tidal lands and anyone who has received a permit to take any materials or to dump, should be required to negotiate a price with him. The director should be given discretion in the determination of such price, but his decision should be held open to public scrutiny before becoming final.

* Notes *

DREDGING AND DUMPING

1. 33 U.S.C. § 403 (1964).
2. *See* pp. 83-85, *supra*.
3. Board of Natural Resources, Minerals under Public Navigable Waters 2, September 7, 1954 (prepared for Maryland Legislative Council).
4. P. FARRAGUT, A RECONNAISSANCE STUDY OF THE CHESAPEAKE BAY 30-32 (Regional Planning Council, 1968).
5. *See* J. Capper, Report on the Water Quality Status of Chesapeake Bay 11, June 3, 1969 (Md. Department of Chesapeake Bay Affairs).
6. MD. ANN. CODE art. 27, § 485 (1957); VA. CODE ANN. §§ 62.1-190 to 62.1-193 (1950).
7. MD. ANN. CODE art. 27, § 485, art. 66C, §§ 22-30, art. 78A, § 15 (1957).
8. VA. CODE ANN. § 62.1-3, 62.1-4 (1950).
9. 33 U.S.C. § 403 (1964).
10. MD. ANN. CODE art. 66C, § 13B, art. 96A, §§ 12-22 (1957).
11. VA. CODE ANN. § 62.1-3 (1950).
12. *See* pp. 106-11, *supra*.
13. *See* pp. 114-16, *supra*.
14. *See* MD. ANN. CODE art. 27, § 485, art. 66C, §§ 22-30, art. 78A, § 15 (1957).
15. *See* pp. 115-16, *supra*.
16. Zabel v. Tabb, No. 67-200 Civ. T., M.D. Fla. 1969.
17. MD. ANN. CODE art. 66C, § 13B (1957). This jurisdiction was expanded to include "the Chesapeake Bay and the Potomac River" by a 1969 amendment. *See* 1969 MD. LAWS ch. 221.

18. MD. ANN. CODE art. 96A, § 12-22 (1957).

19. VA. CODE ANN. § 62.1-3 (1950).

VI.

FISH AND SHELLFISH MANAGEMENT

The Chesapeake Bay fishery resource was well described by Dr. J.L. McHugh in a paper presented to The Governor's Conference on Chesapeake Bay, held at the Wye Institute on September 12-13, 1968. The following excerpt from Dr. McHugh's paper provides a useful summary:

> *Blue crabs*. First in rank by weight and second in value, the blue crab (*Callinectes sapidus*) is an important resource in Maryland. In Virginia it ranked second by weight and third by value in 1967. A summary of the ups and downs of this fishery has been included in the introduction, with some account of the economic problems created by this instability. Like most fishery resources of shallow estuarine waters, the blue crab is affected by changes in water temperature and salinity and by other variable environmental conditions which influence survival of young and perhaps even adults from year to year. Because blue crabs are short-lived, usually not exceeding two years of age, there is no opportunity for the resource to buffer the wide annual changes in survival by accumulating the survivors of successful spawnings. Thus, the success of fishing reflects quite closely changes in survival from natural causes, with a time lag of about two years.
>
> Because most crabs that are not caught in the fishery will die a natural death before the next fishing season, there is no purpose in fishing conservatively except to ensure that an adequate spawning reserve is maintained. It is obvious from the history of the fishery that the size of the spawning stock is not a very good indicator of future abundance, because if it were the resource could not have recovered several times from low levels of abundance, nor would declines have followed periods of great abundance. . . .
>
> *Oysters*. The oyster industry of Maryland ranked second in weight and first in value in 1967. In that year the landed value of oyster production was nearly 70 percent of the total value of Maryland landings. Production has increased from a low of 7.7 million pounds in 1963 to 16.6 million in 1967, but this importance in yield should not be allowed to obscure the great drop in production in the last century (Figure 2). In 1880, according to the records, Maryland produced nearly 72 million pounds of oysters, and production in recorded history did not fall below 20 million pounds until 1929. One (sic) of the 49 years for which records are available, 1962, 1963, 1964, and 1965 were the poorest, and the landings of 16.6 million pounds in 1967 were exceeded in 21 years of the 49.

Oyster production in Virginia has dropped substantially in the last century also, from 45.5 million pounds in 1880, and a record high of 46.8 million in 1897, to a low of 9.0 million pounds in 1967, the poorest year on record. Until 1965 Virginia had maintained her production more successfully than Maryland, although landings were dropping. Virginia's production exceeded that of Maryland for the first time in 1901 and 1904, dropped below Maryland in the period of 1908 to 1929, then exceeded Maryland in four of the five years from 1930 to 1934 and again from 1942 to 1965 inclusive. A blight peculiar to oysters (MSX or Minchinia nelsoni) began to cause heavy mortality on Virginia grounds about 1959 and the industry has not yet recovered.

Maryland's success in improving her oyster production recently has come about through two cases, a massive State program to plant shell and living oysters on public grounds, and relative freedom from the marine blights and pests that have wrecked the oyster industries in Long Island Sound, Delaware Bay, and most parts of Virginia.

The Virginia or eastern oyster thrives naturally in two kinds of environment. In the estuaries the natural grounds are in waters of intermediate salinity, where oysters are able to survive but their principal enemies cannot. Along the seaside of the Eastern Shore they survive well only in the intertidal zone where their enemies cannot prey on them constantly. In Virginia the natural grounds for the most part are in the rivers, where intermediate salinities suitable for survival prevail. Virginia, like Maryland, has set aside all the natural oyster grounds as public grounds. These cannot be leased to private growers. But Virginia's liberal policy on leasing allows private growers to use bottom outside the public areas if this use does not interfere with other fisheries or with navigation. Some of these private grounds are excellent, with bottom characteristics and water conditions equal to the best public ground. But, because there is not much of this type of bottom available for leasing, much of the private ground is in areas marginal for oyster growing. Nevertheless, most of these grounds produce a yield in most years that brings a fair return on investment. The private oyster industry in Virginia was fairly prosperous until epizootics like Dermocystidium marinum, a fungus, and MSX, now identified as Minchinia nelsoni, a one-celled animal, killed most of the crop.

Maryland has many advantages for oyster growing that Virginia lacks. Yet strangely enough, Maryland's public policy has been opposed to leasing of nonproductive bottom. Only a few thousand acres in Maryland are under lease, and these rights were secured many years ago. Thus, almost all Maryland oyster production comes from public grounds. The State is spending large sums of money on activities designed to maintain or improve oyster production on these grounds, and the steady increase in production from Maryland since 1963 would appear to attest that this program has been successful.

Maryland does not have a single large and reliable natural seed oyster bed like the James River in Virginia, although setting is good in many places. Indeed, the small acreage of private ground does not require a large supply of seed. Virginia laws prohibit shipment of seed oysters out of the State, unless special circumstances warrant it. Maryland also has had a shortage of shell for planting back on oyster grounds. Public policy and fishery laws of the two States effectively prevent maximum use of the Bay for growing oysters. If these legal barriers did not exist the Bay could be managed as a gigantic oyster farm, making best use of the characteristics of each part of the environment to produce seed, to serve as growing grounds, or as fattening or holding grounds. . . . [M]ost of the potentially ideal ground is in Maryland. There are indications that the traditional opposition to leasing of oyster bottom not included in the designated public grounds is declining. This promises a bright future for the oyster industry of Maryland.

The reasons for failure to utilize the natural attributes of the Bay for oyster growing are social-political. Traditionally, the man who harvests a crop from the public grounds, usually by backbreaking hand labor, is opposed to private ownership. It is traditional in the Chesapeake, as in almost every fishing area in the United States, to want to divide the harvest among all who would wish to share it. Almost to a man, watermen in the Chesapeake see private ownership as a threat to their livelihood and way of life. They reason that private leasing of oyster bottom will eventually place control of the industry in the hands of a few large operators.

Clams. Two important clam resources are abundant in Chesapeake Bay, the hard clam (*Mercenaria mercenaria*) and the soft clam (*Mya arenaria*). Neither species seems ever to have been fully exploited, probably because clams have not been traditional seafoods in the Chesapeake area. Landings of hard clams have tended to increase slowly. Most of the catch is taken in Virginia. The soft clam fishery did not exist before World War II. It grew very rapidly in the 1950's and reached peak production in 1964, when more than 8 million pounds of meats were produced. This is entirely a Maryland fishery, although the species is abundant in Virginia also. The impetus for development of this fishery was the sudden decline of the New England soft clam resource. In 1965, Maryland produced about 70 percent of the total Atlantic coast catch, but soft clam production in New England has

> been rising, and this has created marketing problems for the Maryland industry.
>
> The reason for failure of a soft clam fishery to develop in Virginia is probably high costs relative to the developed Maryland fishery and lack of demand. The Maryland fishery required agressive marketing activities for its development to the present level, and production undoubtedly could be much higher if demand existed. Total Chesapeake landings of soft clams probably could be increased substantially without harming the resource. The relatively small hard clam industry, which now produces about 2-1/2 million pounds of meats a year, probably also could increase its production if a market existed.
>
> *Finfishes*. It is obvious that mollusks and crustaceans dominate the fisheries of Maryland and Virginia, especially in value. Crabs, oysters, and clams made up nearly 62 percent by weight and more than 89 percent by value of all Maryland landings in 1966, 61 percent by weight and 91 percent by value in 1967. A variety of fishes is landed in Maryland, but only a few are of any great importance. The principal species, in order of importance by weight, are menhaden, striped bass, swellfish, alewife, white perch, shad and flounders. By value the order is striped bass, white perch, flounders, shad, menhaden, swellfish, and alewives. Landings of these species individually, except menhaden, have not exceeded 5 million pounds in the last few years, and in value none has exceeded $700,000.[1]

The response of the Maryland and Virginia legislatures to the problems of regulating and managing these resources has been erratic and piecemeal. Largely at the behest of watermen, a large volume of restrictive legislation has been enacted. The ostensible purpose of this legislation is to promote efficient management and conservation, but often it has the effect of "protecting special interest, spreading the catch over more people than are necessary to take it, and generally increasing the cost of catching fish without protecting the capacity of the resource to reproduce itself."[2] Indeed a wag might describe the present state of the fishery laws with a series of pejorative labels: inefficient, discriminatory, provincial and communistic.

The inefficiencies which the Maryland and Virginia laws mandate for the Bay fishery are intentional and pervasive. They include limitations on the length of season, size limits, and type of gear.[3] The seasonal limitations require that gear remain unused for part of the year. The size limitations require that substantial time be spent returning the undersized catch to the waters. The gear limitations require watermen to use archaic harvesting methods. While all of these limitations can be rationalized as conservation measures, because they are codified into law they limit the fishery managers' options in determining how the yield of the fishery can best be sustained.

The basic discrimination found in the laws of both Maryland and Virginia are limitations which restrict the commercial taking of fish and shellfish to their respective residents. This restriction is modified by the Potomac River Fisheries Compact, which opens the estuarine portions of the Potomac to residents of both Maryland and Virginia.[4]

The discrimination is complemented by provisions of the Maryland Code which directly or indirectly prohibit corporations from engaging in commercial fishing and by provisions of the Virginia Code which limit the extent to which Virginia residents can participate in fishing ventures with non-residents.[5] These provisions are presumably designed not only to make the prohibitions against non-residents effective but also to protect the individual waterman against corporate competition.

Discrimination against non-residents is understandable. The Maryland and Virginia legislatures cannot realistically be expected voluntarily to share the Bay's bounty. But as detailed in the earlier quotation from Dr. McHugh, there is the real possibility of mutually advantageous trade-offs between Maryland and Virginia in the oyster industry. Maryland could be permitted to obtain Virginia seed oysters in return for allowing Virginians greater access to Maryland oyster bottom. Changes in both Maryland and Virginia law are necessary to permit this cooperation.

Moreover, the discrimination rests on shaky constitutional underpinnings. While the discrimination against corporations could probably withstand an attack as a denial of "equal protection" (as a conservation measure), the discrimination against non-residents is open to significant questions under the privileges and immunities clause of the United States Constitution.[6] If the United States Supreme Court were to find the exclusion of non-residents unconstitutional, the whole structure of fishery laws in both Maryland and Virginia would be undermined.

In Maryland the provincialism of fishery laws has been institutionalized. Committees of watermen exist in the various counties which have a significant interest in the Bay's fishery. A main purpose of each committee is to influence legislation to benefit its narrow parochial interest. In response to these diverse pressures, the General Assembly has enacted a series of laws which apply not to the whole Bay, but only to the jurisdictional waters of particular counties. These laws not only apply different rules and regulations for the taking of fish and shellfish from county to county, but also serve to exclude non-residents of the county from the commercial taking of fish and shellfish in county waters. The picture is further complicated by provisions of the Code which open a territorially defined portion of the main arm of the Bay, for the dredging of oysters by any Maryland resident who has obtained a license. The resulting labyrinth of legislation appears to contribute nothing to the rational conservation and management of the Bay fishery. Fortunately, Virginia's fishery laws have avoided the myriad local preferences that permeate Maryland's laws.

Although case law is replete with statements that Maryland and Virginia own the fish and shellfish within their territorial waters, the legislatures for the most part have not asserted any direct proprietary interest nor transferred any exclusive rights to private individuals. Instead fish and shellfish have been treated as a communal resource, available to any citizen with the initiative to capture them. With reference to migratory species this approach is understandable. While the day may come when aquaculture so develops that schools of fish may be raised as today a farmer raises a herd of cattle, it is not yet technologically at hand.

The treatment of the relatively sedentary oyster as a common resource is less justifiable. Under the Virginia Constitution and the Maryland statutes, natural oyster bars cannot be granted into private ownership.[7] The economic effects of these prohibitions have been described as follows:

> [T]he individual operator stands little chance of making profits in the long run. If the supply of oysters is good, his competition will increase and the price will decrease. Since all beds are open to everyone, an individual cannot wait for the right price or condition of oyster to harvest from a particular bed. He is always involved in a race with other oystermen. This race forces him to fish harder for less catch than he would if he had exclusive rights to a bed. He therefore increases his average cost of harvest, and these higher costs eat up his profits.[8]

The absence of private rights in natural oyster bars also tends to discourage the investment of capital and innovation in the oyster fishery.

The statutes of both Maryland and Virginia do permit the leasing of bottom (other than natural oyster bars) for private oyster culture.[9] As indicated in the earlier quotation from Dr. McHugh, Virginia has been liberal in granting such leases but has limited suitable bottom available. Maryland has a large amount of suitable bottom but has granted few such leases, and those outstanding are used almost exclusively for the temporary storage of oysters taken from natural bars rather than for actual cultivation. In part the limited number of Maryland leases can be attributed to the procedure statutorily prescribed for their creation. Under this procedure, when an applicant seeks a private lease, any three residents of Maryland may protest and get a hearing in a trial court. If it is established that the natural growth of oysters on the requested bed is of such abundance that during the preceding five years the public has resorted to them for livelihood, then the requested bed is construed to be a natural bar and the lease is denied.[10] Reputedly, whenever one individual comes forward and testifies that he did a day's work on the bed within the preceding five years, the courts have been inclined to refuse to grant the lease.

Despite the demonstrable efficiencies of private oyster culture, doubts can be raised as to the wisdom of leasing all suitable bottom to a number of private oyster farms. The economic dislocation would be significant; society can afford some sentimental attachment to the proud tradition of the oysterman. But at some time it appears that the choices open to the public oyster administrators should be increased so that they are able, by creating more private property rights, to increase the total yield of the oyster industry and to decrease the cost of oysters to the consumer.[11]

Recommendations

1. The detailed restrictions found in Maryland and Virginia law on length of season, size limits and type of gear, should be repealed and agencies in Maryland and Virginia respectively should be delegated authority to promulgate such regulations. The language of such delegation could be modeled after the following language from the Potomac River Fisheries Compact:

   > The . . [state agency] may by regulation prescribe the type, size and description of all species of finfish, crabs, oysters, clams and other shellfish which may be taken or caught within its jurisdiction, the place where they may be taken or caught, and the manner of taking or catching.[12]

   This approach would give public administrators the range of choice necessary to manage the fishery efficiently. It provides a method through which Maryland fishery laws could be rid of their pervasive provincialism. Through adequate notice, hearing and appeal provisions, watermen can be assured fair representation.

2. The legislative restrictions on commercial fishing by non-residents and corporations should be repealed, and administrative agencies in Maryland and Virginia should be delegated power to regulate who can

take fish and shellfish through a licensing procedure. It is, of course, anticipated that the regulation promulgated under this authority by politically responsive administrators would continue to protect the respective selfish interests of Maryland and Virginia. But there are several advantages in doing this through regulation rather than legislation. The first two recommendations create a forum for negotiations. As Maryland and Virginia administrators acquire greater experience with extensive fishery management, they will be able to coordinate their activities and look for mutually advantageous trade-offs. Administrators on each side can bargain with their rule-making authority. The administrative flexibility provides a technique for Maryland-Virginia cooperation without a formal compact. In addition this recommendation will provide a method for the orderly change in Maryland and Virginia fishery regulations, in the event that discrimination against non-residents is found to be unconstitutional.

3. The Maryland legislation and the Virginia constitutional provision and legislation which precludes the leasing of natural oyster bars should be repealed, and administrative agencies in Maryland and Virginia should be given authority to grant oyster leases according to such procedures as they prescribe through regulation. This recommendation gives to fishery administrators the requisite powers to work out an accommodation between public and private oyster cultures.

* Notes *

FISH AND SHELLFISH MANAGEMENT

1. J. McHUGH, FISHERIES OF CHESAPEAKE BAY, PROCEEDINGS OF THE GOVERNOR'S CONFERENCE ON CHESAPEAKE BAY, II-149 through II-155 (Maryland, 1968).
2. _Id_. at II-158.
3. _See_ MD. ANN. CODE art. 66C, §§ 262-342, §§ 696-717 (1957); VA. CODE ANN. tit. 28.1 (1950).
4. _See_ MD. ANN. CODE art. 66C, § 261A (1957).
5. _See, e.g._, MD. ANN. CODE art. 66C, §§ 262, 708(e) (1957); VA. CODE ANN. §§ 28.1-65, 28.1-123 (1950).
6. _See_ pp. 155-56, 87-88, _supra_.
7. VA. CONST. § 175; MD. ANN. CODE art. 66C, § 696 (1957).
8. THE POTOMAC NEWSLETTER, vol. II, No. 12, 5 (December 30, 1968).
9. MD. ANN. CODE art. 66C, § 708 (1957); VA. CODE ANN. §§ 28.1-108, 28.1-109 (1950).
10. MD. ANN. CODE art. 66C, §§ 696, 708 (1957).
11. _See_ THE POTOMAC NEWSLETTER, _supra_ note 8 at 6.
12. MD. ANN. CODE art. 66C, § 261A, art. III, § 2 (1957).

PART FOUR:

DRAFT LEGISLATION

I.

INTRODUCTION

The starting point in drafting "model" legislation is a question---what is wrong with existing laws and legal institutions? The most frequent response when this question is asked with reference to Chesapeake Bay is---"fragmentation of authority". It is true that there is no shortage of Bay government. The federal government, the governments of Maryland and Virginia, the governments of their respective counties and cities, and an interstate compact commission, all have spheres of governmental authority.

But this is not the crux of the problem. The federal government has demonstrated its willingness to cooperate with, and to defer to, effective state action. The federal water quality program affords a good illustration. The legislatures of Maryland and Virginia have zealously avoided the delegation of significant powers over the Bay to counties or cities. Although the Bay is divided between Maryland and Virginia, both have a significantly broad territorial expanse to effectively manage their respective portions. The only extant compact commission is limited in power to the Potomac fishery.

Hence the problems which exist are to be found primarily within Maryland and Virginia state government. Existing state legal institutions suffer from two major inadequacies. First, the state legislatures, clinging vestigially to the nineteenth century, have attempted to administer the Bay themselves. Rather than delegating broad managerial power to the executive branch, they have responded to narrow problems with narrow legislation. These responses rapidly become out-of-date but linger on as law. In short, the legislatures have refused to give administrators the "range of choice" necessary for effective management.

Second, those powers which have been delegated by the legislatures have been scattered throughout the states' administrative apparatus. Various state agencies have duplicating, overlapping and sometimes inconsistent powers, but in neither Maryland nor Virginia is there a single agency with the requisite authority to plan and coordinate the administration of the Bay and its resources.

In recent years the most popular model for meeting the problems of river basin management has been the federal-interstate compact. The success of the Delaware River Basin Commission has led to the negotiation and proposal of similar compacts for the Potomac and Susquehanna Rivers. Such a management model has certain advantages for the Chesapeake Bay. A compact between Maryland, Virginia, the United States (and perhaps Delaware) could be given territorial jurisdiction over the whole Bay. Theoretically, at least, the state legislatures could delegate broad power to the compact commission which could exercise them in coordinated, autonomous fashion (free from state legislative interference) for the compact's duration.

But the compact model also has disadvantages. It adds yet another tier to the existing surfeit of Bay governments. It would be difficult to integrate such a compact with the already negotiated and proposed Potomac River Basin Compact which has powers over the estuarine portions of the Potomac. Finally, it would be difficult to negotiate a compact which gives adequate powers to the governing commission and still be acceptable to both Virginia and Maryland. Although Maryland and Virginia have a common interest in various aspects of Bay management they also have disparate and competitive interests in preserving the Bay resources within their respective boundaries exclusively for themselves and their citizens. At best, such a compact would take years to negotiate; at worst, it would be emasculated through the retention of powers by the states.

Because of the disadvantages of the compact format, it was decided to reform state government rather than supplant it. The legislation which follows provides such a reform, adapted for adoption in Maryland. Basically it is a legislative delegation of broad planning, regulatory, administrative and operational powers to a single state agency---The Chesapeake Bay Basin Department. The Department is given territorial jurisdiction over all waters of the state. This jurisdiction was decided upon by starting with Bay waters and moving upstream into the fresh water tributaries of the basin with the realization that fresh water input so intimately affects estuarine waters that the two cannot be rationally separated. Also involved was the perception that, since almost all Maryland waters are in the basin except for some waters on the eastern shore which drain into the bays behind the Atlantic barrier beaches and which present similar management problems, that the Department might as well have authority over all state waters. Hence the title of the Department is a misnomer, chosen on the theory that the dog should wag the tail.

The territorial jurisdiction of the Department would, of course, be curtailed upon the adoption of the Susquehanna and Potomac River Basin Compacts. Assuming the adoption of these compacts, their respective commissions would have primary power within their jurisdictional bounds but to the extent they permit state regulation and activity the Department would be the Maryland operative.

The Chesapeake Bay Basin Department is designed to replace two existing state agencies---the Department of Water Resources and the Department of Chesapeake Bay Affairs. It is also designed to take from the State Health Department the power to regulate discharges of human and municipal wastes. Its primary role is as a coordinator, planner and regulator. It is charged with the duty of developing a plan for the utilization and conservation of the waters of the state and a complementary plan for utilization and conservation of Chesapeake Bay resources. It is given regulatory powers necessary to assure implementation of these plans. In addition when a need appears for statewide development and management (for example, a state run waste acceptance system) it may own and administer facilities.

II.

MODEL STATUTE FOR BAY BASIN DEVELOPMENT

(ADAPTED FOR ADOPTION IN MARYLAND)

CHESAPEAKE BAY BASIN DEPARTMENT

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ARTICLE 1

CHESAPEAKE BAY BASIN DEPARTMENT

CREATED

Part One

Purposes and Definitions

1.101 - Purposes.

It is the intention of the General Assembly in this enactment of this act that the planning, development, management and conservation of the waters of the State, the Chesapeake Bay, and all other tidal waters and tidal resources are the proper responsibility of the State.

1.102 - Definitions.

For the purpose of this act, except as may be otherwise required by the context:

(a) "Department" means the Chesapeake Bay Basin Department created by this act.

(b) "Director" means the Director of the Chesapeake Bay Basin Department.

(c) "Person" means an individual, partnership, corporation, joint stock company, firm, society, association or other unincorporated organization, receiver, trustee, and any officer, agent or employee of any of the foregoing acting in his capacity as such, but shall not include governmental agencies or their officers and employees.

(d) "Governmental Agencies" means the government of the United States, Maryland, and all other States, their political subdivisions, and every department, agency, commission and other unit or instrumentality thereof and interstate compact commissions.

(e) "Waters of the State" means all waters, surface and underground, tidal and non-tidal within the boundaries of the State, the Atlantic Ocean bordering on the coast of the State for a distance of three (3) miles from the mean low watermark on the coast, and the flood plain of free-flowing waters determined by the Department as being subject to a fifty (50) year flood frequency.

(f) "Tidal Waters" means all waters within the boundaries of the State where the tide ebbs and flows, and the Atlantic Ocean bordering on the coast of the State for a distance of three (3) miles from the mean low watermark on such coast.

(g) "Non-Tidal Surface Waters" means all surface waters of the State which are not affected by the ebb and flow of the tides.

(h) "Tidal Region" means the entire geographical area embraced by tidal waters and submerged tidal land, and all lands located within one (1) mile of the mean high watermark on tidal waters, and all lands which are one hundred (100) feet above sea level, or less, in Somerset, Worchester, Wicomico, Dorchester, Talbot, Caroline, Kent, Queen Annes, Cecil, Harford, Baltimore, Anne Arundel, Prince Georges, Calvert, Charles, St. Mary's Counties and Baltimore City.

(i) "Resources of the Tidal Region" means all natural resources within the tidal region including but not limited to, fresh water, tidal water, open space, scenic, historic, wilderness, wetland and other natural areas, harbors, aquatic life, wildlife, sand, gravel, earth, clay, shell deposits, minerals, ore, metals, oil and gas.

(j) "Aquatic Animal Life" means all species of finfish, crabs, oysters, clams, terrapins, lobsters, zooplankton and all other animal species that live or habitually reside in water.

(k) "Aquatic Plant Life" means all species of plants that live in water.

(l) "Tidal Shore Land" means all land within the tidal region except submerged tidal land.

(m) "Submerged Tidal Land" means all land lying under the tidal waters up to the mean high watermark.

(n) "Project" means any work, service or activity which is determined by the Department to be a separate entity for purposes of evaluation, except that it shall not include the taking of aquatic animal life.

(o) "Facility" means any real or personal property, structures thereon and improvements thereof, except that it shall not include vessels.

(p) "Structure" means any assembly of materials above or below the surface of land or water, including but not limited to houses, buildings, plants, bulkheads, jetties, wharves, piers, docks, landings, dams, and waterway obstructions.

(q) "Development" means the division of land into two or more parcels, the construction, reconstruction, conversion, structural alterations, relocation or enlargement of any structure, or of any excavation or landfill, the filling of submerged land, and any change in the use of any structure, or land, or extension of use of land.

(r) "Development Regulation" means all regulations which restrict the use and development of land, including but not limited to zoning restrictions, subdivisions controls, master plans and permits procedures placing restrictions on building, construction and filling.

(s) "Filling" means either the displacement of the waters of the State either by the deposition of sand, gravel, earth or other materials or the artificial alteration of the levels of such waters by structures, drainage ditches or otherwise.

(t) "Vessel" means every description of watercraft, capable of being used as a means of transportation on water or on ice except that it shall not include watercraft moored in the waters of the State at a stationary location on a semi-permanent or permanent basis or sea planes.

(u) "Court" means the Circuit Court of a county or the Baltimore City Court.

Part Two

Organization

1.201 - Creation.

There is hereby created a Chesapeake Bay Basin Department, which shall be part of the Department of Natural Resources.

1.202 - Director.

(a) The Governor shall appoint, upon the recommendation of the Secretary of Natural Resources, a competent person with the qualifications prescribed herein as Director of the Chesapeake Bay Basin Department. The Director shall be the head of the Department and shall personally direct its operations and activities. The Director shall be a person with executive ability and experience, and shall have an academic degree and knowledge of the general principles involved in the administration, improvement, planning, management and conservation of the waters of the State and the resources of the tidal region. The Director shall devote his full time to the work of the Department and shall receive such salary as may be provided in the annual State Budget. The Director shall hold office under and subject to the provisions of Section 234(c) of Article 41 of the Annotated Code of Maryland, as amended.

(b) As the head of the Chesapeake Bay Basin Department, the Director shall, subject to the authority of the Secretary of Natural Resources as provided by law, be responsible for the exercise of all the powers and duties conferred upon the Department by the provisions of this act.

1.203 - Staff.

The Director shall appoint the staff of the Department, subject to the authority of the Secretary of Natural Resources under Section 234(c) of Article 41 of the Annotated Code of Maryland, as amended, and subject to the provisions of the merit system. The staff of the Department shall consist of such employees as may be necessary to carry out the duties of the Department, in such numbers and at the salaries provided in the annual State Budget. Insofar as the provisions of the merit system provide for disciplinary or dismissal proceedings against employees to be brought by the appointing authority, the Director shall be the appointing authority unless the Secretary of Natural Resources by written directive provides that the Secretary shall be the appointing authority. All employees shall be under the supervision and control of the Director and shall perform such duties as he may prescribe. The Director may require any employee who receives moneys to furnish bond in such amount as the Director may determine.

1.204 - Disposition of Moneys.

All moneys received under the provisions of this act from license fees, taxes, fines, penalties, forfeitures, rent, royalties and other sources shall be paid to the Comptroller of the Treasury and credited to general funds.

Part Three

General Powers, Relationship of Department to Federal Government and Interstate Compact Commissions, Severability

1.301 - General Powers.

In addition to the powers specifically delegated to the Department by this act, it shall also have the power to:

(a) supervise, regulate and control the water of the State and the resources of the tidal region;

(b) exercise the powers conferred and perform the duties imposed by all laws hereafter enacted relating to the water of the State and the resources of the tidal region;

(c) enter into contracts, and in its own name sue and be sued;

(d) collect, compile, analyze, interpret, coordinate, tabulate, summarize, and distribute technical and other data and conduct studies, sponsor research and prepare reports on resource problems of the State;

(e) prepare, publish and disseminate information and reports in relation to the waters of the State and the resources of the tidal region and on the views, policies and recommendations of the Department in relation thereto;

(f) establish standards to guide the construction, operation and management of projects and facilities;

(g) plan, design, acquire, construct, reconstruct, complete, own, improve, extend, develop, operate, maintain, and regulate any and all projects, facilities, properties, activities and services, determined by the Department to be necessary, convenient or useful for the purposes of this act;

(h) negotiate for such loans, grants, services, or other aids as may be available from public or private sources to finance or assist in effectuating any of the purposes of this act;

(i) adopt, amend and repeal such rules and regulations as it may deem appropriate for the effectuation and enforcement of this act;

(j) institute an action or actions in its own name to compel compliance with any and all of the provisions of this act or any of the rules and regulations of the Department adopted pursuant thereto;

(k) acquire real or personal property and any interest therein as it may deem appropriate for carrying out its functions under this act, by eminent domain;

(l) hold, administer, maintain and dispose of real and personal property and any interest therein as it may deem appropriate for carrying out its functions under this act;

(m) sell or dispose of any of its products or services and make charges in connection with the use of any of its facilities;

(n) conduct such investigations and inspections as it may deem appropriate to carry out its functions under this act;

(o) undertake or contract for with any private or governmental organization, laboratory or research group, studies, surveys and experiments concerning the water resources of the State.

1.302 - Relationship of Department to Federal Government and Interstate Compact Commissions.

(a) Nothing in this act shall in any way impair the powers of the United States or of any agency or department thereof, over public waters. Should any conflict arise between the powers of the United States and those of the Department under this act, the conflicting provisions of this act shall be abrogated to the extent of the conflict.

(b) For all purposes the Department shall be considered the successor to the duties and powers of the Tidewater Fisheries Commission as such duties and powers are specified in the Potomac River Compact of 1958. To the extent that the terms of this Compact limit, restrict or otherwise conflict with the powers of the Department under this act, the Compact provisions shall take precedence. After the effective date of this act, the Maryland members of the Potomac River Fisheries Commission shall be appointed by the Director.

(c) To the extent that any interstate compacts other than the Potomac River Compact of 1958 to which the State is now or may become a party concern all or part of the waters of the State, or the resources of the tidal region, the Department shall be the coordinating and enforcing agency of the State and shall perform all activities and functions which devolve upon the State under the compact. To the extent that any such compact may limit, restrict or conflict with the powers of the Department under this act, the compact provisions shall take precedence.

1.303 - Severability.

If any provisions of this act or the application thereof to any person or governmental agency is held invalid, such invalidity shall not affect the other provisions or any other application of the act which can be given effect without the invalid provision or application, and to this end the provisions of this act are declared to be severable.

ARTICLE 2

WATERS OF THE STATE

Part One

Water Plan

2.101 - Development, Adoption and Contents.

The Department shall develop and adopt and, from time to time, review, revise and amend, a plan for development, conservation, utilization and management of the waters of the State, and may adopt such plan or any revision thereof in such part or parts as it may deem appropriate. The water plan shall include, but need not be limited to, determinations of immediate and long-range needs and objectives, classifications of water uses which are to be protected and preserved, and projects and facilities, governmental or private, which the Department determines are necessary or useful for the optimum development, conservation, utilization and management of the waters of the State.

2.102 - Relationship to Other Plans.

The water plan shall be complementary to the plan for the tidal region provided for by Section 3.101 of this act, and the Department, in developing, reviewing, revising and amending the water plan shall give consideration to relevant portions of federal, state, regional and local plans.

Part Two

Water Quality Control

2.201 - Water Quality Standards.

(a) In implementing the water plan the Department, by regulation, shall adopt, and may from time to time change, the following: water quality standards for the waters of the State; standards of water quality for particular waters of the State; criteria of water quality for each classification of water use established by the comprehensive water plan; standards and methods of preserving, regulating, controlling and improving water quality; definitions of pollution and identification of pollutants.

(b) Standards of water quality and criteria of water quality may relate, but need not be limited to bacterial, viral, chemical, radioactive, organic, thermal, gaseous, liquid, solid or soil additions to the waters of the State from any source, or to enrichment of the waters of the State from any source.

(c) No person or governmental agency shall discharge any effluents into the waters of the State which interfere with maintenance of the standards and criteria of water quality adopted by the Department. The Department may, by regulation, require that any person or governmental agency discharging effluent into the waters of the State shall monitor the quality of such effluent and make reports to the Department, or that the Department shall monitor the quality of such effluent itself and charge such person or governmental agency the expense thereof.

2.202 - Other Water Quality Controls.

(a) The Department may require that any person or governmental agency secure a permit, as the Department may prescribe by regulation, before discharging effluent into the waters of the State. In the issuance of such permits the Department may impose such limitations on the duration, location, nature and quality of the effluent as it may find necessary for the effective maintenance of the water quality standards it has promulgated.

(b) The Department may, by regulation, require that persons or governmental agencies discharging effluent into the waters of the State pay a charge to the Department. If the Department imposes such charges, it shall prescribe, by regulation, reasonable standards for the determination of the amount.

(c) The Department may, by regulation, require vessels registered in the State to carry waste collection and disposal equipment of a type suited to reduce the deposition in the waters of the State of human and other sewage and waste.

(d) The Department may adopt any other regulations necessary for the implementation and enforcement of the water plan and the water quality standards for the waters of the State.

2.203 - Existing Discharges.

The fact that any person or governmental agency has, prior to the effective date of this act, been discharging effluent at a given location, in a given quantity or of a given quality shall in no way be considered to exempt such person or governmental agency from any procedures the Department may adopt pursuant to this act to regulate and control effluent discharges and water quality.

2.204 - Defense in Private Suit.

In any suit brought by any person or governmental agency against any other person or governmental agency for reducing the quality of water or for rendering it harmful or noxious or for in any way affecting the usefulness of the water, proof that the defendant is acting within all the applicable regulations and procedures of the Department shall be a complete defense to the action.

2.205 - Transition.

All water quality standards, regulations, controls and effluent permits in effect on the effective date of this act shall continue in full force and effect until changed, amended or modified by the Department pursuant to the provisions of this act.

Part Three

Use of Waters

2.301 - General Powers.

In implementing the water plan the Department may adopt regulations it deems necessary for the optimum development, conservation and utilization of the waters of the State.

2.302 - Uses by Persons.

(a) No person may use, divert, or appropriate, consumptively or nonconsumptively, any of the waters of the State without first securing a permit from the Department pursuant to such regulations as the Department shall prescribe, except that the Department may, by regulation, exempt from the requirements of this Section such uses, diversions or appropriations as it may reasonably find to have a minimal effect on the waters of the State. The Department shall only issue a permit if it determines that the contemplated use, diversion or appropriation is in the public interest as a practicable and efficient utilization of the waters of the State and will not adversely affect either the water plan or such part or parts thereof which have been adopted. Any person issued a permit which entails the use, diversion or appropriation of tidal waters shall comply with the procedure in Section 3.203 of this act before starting such use, diversion or appropriation.

(b) Permits issued under this Section shall specify the character, location and duration of the use, diversion or appropriation, the methods to be applied in its execution and such other conditions, restrictions or qualifications as the Department deems necessary to insure conformity with the water plan.

(c) Permits issued pursuant to this Section shall not create any vested rights and may not be sold, assigned or transferred, and do not become appurtenant to land. The Department shall periodically review such permits at least once every five (5) years and may revise, amend or revoke them in effectuating the comprehensive water plan and the comprehensive plan for the tidal region.

(d) Any person having a vested right to use, divert or appropriate any water of the State by virtue of prior statute or of common law who is refused a permit to exercise such right or granted a permit with conditions, restrictions or qualifications which derogate such right, may petition a court as provided in Section 5.201 of this act to determine whether the action of the Department is an unreasonable exercise of the police power and therefore constitutes a taking of property without compensation. If the court finds the action of the Department to be a taking of property without compensation the court shall order the Department to issue an appropriate permit but the order shall not affect the rights of any other person.

2.303 - Uses of Governmental Agencies.

No governmental agency may use, divert or appropriate, consumptively or non-consumptively, any of the waters of the State without first securing the approval of the Department. The Department shall, by regulation, prescribe the procedure to be followed in securing such approval.

2.304 - Transition.

All rules, regulations and permits relating to the use, diversion or appropriation of waters of the State in effect on the effective date of this act shall remain in effect until changed, amended or modified by the Department pursuant to the provisions of this act.

Part Four

Boating

2.401 - General Powers.

In implementation of the water plan and the plan for the tidal region, and to protect public safety and welfare the Department may, by regulation, prescribe the type, size and description of all vessels which may be operated on the waters of the State, the place where they may be operated and the manner of operation.

2.402 - Safety.

The Department may, by regulation, impose restrictions on the operation of vessels that it deems appropriate to protect public safety, including but not limited to, requirements that vessels carry safety equipment, speed limits and restrictions on water skiing and aquaplaning.

2.403 - Enforcement.

The Department is charged with the primary duty of enforcing the provisions of this act relating to the use of vessels and the regulations promulgated thereunder and officers, agents or employees of the Department are authorized to stop and inspect vessels in the exercise of this duty.

2.404 - Transfer of Powers.

All powers and duties relating to the numbering, identification, certificates of title, sale, assignment or transfer, fees and excise taxes, liens, licensing of manufacturers or dealers, of, for, or on, vessels and the reporting of boating accidents, found in Article 14B, Sections 1-10 of the Annotated Code of Maryland, as amended, on the effective date of this act are herewith transferred to the Department of Motor Vehicles.

2.405 - Transition.

All rules and regulations governing the operation and use of vessels in the waters of the State in effect on the effective date of this act and all laws relating to the operation and use of vessels in the waters of the State which are repealed by this act, shall remain in effect as regulations of the Department until changed, amended or modified by the Department pursuant to the provisions of this act.

ARTICLE 3

THE TIDAL REGION

Part One

Plan for the Tidal Region

3.101 - Development and Adoption.

The Department shall develop and adopt and, from time to time, review, revise and amend a plan for the development, conservation, utilization and management of the resources of the tidal region, and may adopt such plan or any revision thereof in such part or parts as it may deem appropriate. The plan for the tidal region shall generally comprise a report or statement of development and conservation proposals with maps, diagrams and text, and shall include, but need not be limited to:

(a) a determination of immediate and long-range needs and objectives;

(b) a land use plan element, showing the existing location, extent and intensity of uses of tidal shore land and submerged tidal land, and providing standards for the development of such lands for residential, commercial, industrial, agricultural, recreational, maritime and fishing purposes, so as to encourage multiple compatible uses of such land, to effect a reconciliation of alternative and conflicting uses of such lands and to enhance public access to tidal waters;

(c) a circulation plan element showing the location and types of facilities for all modes of transportation by land, water and air required for the efficient movement of people and goods into, about and through the tidal region, including terminals, facilities and rights of way;

(d) a utility service plan element analyzing the need for and showing the future location of facilities for water supply and distribution, drainage, sewage and waste treatment and solid waste disposal and provision for other related utilities;

(e) a recreation plan element showing a comprehensive system of areas and public sites for recreation, including the following, with their locations and proposed development: natural reservations, parks, parkways, bicycle paths, trails, beaches, vista points and other recreational facilities;

(f) a conservation plan element for the conservation, development and utilization of natural resources, including open space, fresh water, tidal waters, forests, soils, marshes, wetlands, harbors, shore land, submerged land, aquatic life, wildlife, sand, gravel, earth, clay, shell deposits, minerals, ore, metals, oil, gas and other resources of the tidal region;

(g) an economic development plan element providing for the development and maintenance of full employment opportunity.

3.102 - Relationship to Other Plans.

The plan for the tidal region shall be complementary to the water plan provided for by Section 2.101 of this act, and the Department, in developing, reviewing, revising and amending the plan for the tidal region shall give consideration to relevant portions of federal, state, regional and local plans.

Part Two

Rights in Tidal Waters and Submerged Tidal Lands

3.201 - Ownership of Tidal Waters and Submerged Tidal Lands.

The State of Maryland owns all tidal waters and all submerged tidal land except to the extent that such submerged tidal lands have been transferred by the State by a valid and extant grant, lease or patent, or by a valid and extant grant confirmed by Article 5 of the Declaration of Rights of the Constitution of Maryland.

3.202 - Riparian Rights in Tidal Waters and Submerged Tidal Lands.

Except to the extent given other rights by statute, persons owning land bounding on tidal waters shall, by virtue of such ownership, only have the following rights in tidal waters and submerged tidal lands:

(a) the right of access to tidal waters;

(b) the right to land formed by natural accretion in front of such land;

(c) the right to build in front of such land for non-commercial use, landings, wharves, docks or shore erosion control structures, any of which upon completion becomes their property. The exercise of these rights are subject to the regulatory procedure in Sections 4.201 and 4.302 of this act ant to all other regulatory powers given by law to any governmental agency.

3.203 - Transfer of the State's Interest.

Any person issued a permit to use, divert or appropriate tidal waters under Section 2.302, or to engage in a project under Section 4.302 shall, before starting on such use, diversion, appropriation or project, present the permit to the Director, who shall be the trustee of tidal waters and submerged tidal lands owned by the State. The Director shall review the use, diversion, appropriation or project authorized by the permit and shall determine the extent to which it requires the use or taking of tidal waters, submerged tidal land or other resources owned by the State. The Director shall determine the consideration, if any, which the person shall be required to transfer to the State in return for such use or taking, the nature and terms of payment and the statements which the person shall be required to furnish the Department; provided that the Director shall not require any person owning land bounding on tidal waters to transfer any consideration in payment for the exercise of rights given such person under Section 3.202. The Director shall set forth his determinations in an order which shall be published once a week for two successive weeks in a newspaper having general circulation in the area of the use, appropriation, diversion or project and the order shall not become final unless it remains unrevoked ten (10) days after final publication. After the order becomes final the Director shall be empowered to transfer in the name of the State any interest in real or personal property necessary for the use, appropriation, diversion or project to be pursued. Any person who fails to comply with the terms of the order shall forfeit the permit and all interests in real or personal property transferred to him by the Director.

Part Three

Tidal Shore Lands Controls

3.301 - Designation of Areas of Restricted Development.

The Department may, pursuant to such procedures as it shall prescribe, by regulation, designate all or any portion of the shore lands of the tidal region as areas of restricted development upon a finding that additional controls on land development are necessary within such area or areas to implement the plan for the tidal region. The Department may, from time to time, revise or abolish such designations. Any shore lands designated as an area of restricted development may not be used for any purpose other than that for which they were actually and lawfully being used when they were so designated, except as authorized by the provision of Section 3.302 or Section 3.303.

3.302 - Jurisdiction of Other Governmental Agencies.

Any other governmental agency having land use control jurisdiction over a portion of shore lands designated as an area of restricted development may submit to the Department development regulations governing such portion of shore lands. If the Department finds that such development regulations meet or exceed the minimum requirements of the plan for the tidal region it shall approve them, but the Department shall not approve any such development regulations unless they provide that, insofar as the Department may prescribe, any changes in, or special exceptions or variances thereafter made or authorized relating to the use to which any land may be put, shall not become effective until accepted by the Department. If the Department has approved the development regulations of an other governmental agency, such governmental agency shall enforce them and the development of land in such area of restricted development may be authorized as provided therein. Approval may be revoked if the Department finds that development regulations are not being adequately enforced or no longer meet the minimum requirements of the plan for the tidal region due to a revision of such plan.

3.303 - Jurisdiction of the Department.

The Department shall, by regulation, prescribe development regulations for any area designated as an area of limited development if the Department has not approved the development regulations of any other governmental agency or if such approval has been revoked. Such development regulations shall implement the plan for the tidal region and the development of land in such areas of restricted development may be authorized as provided therein. The Department shall have discretion, by regulation, to, from time to time, revise or abolish such development restriction in whole or part.

Part Four

Aquatic Life

3.401 - General Powers.

(a) The Department may, by regulation, prescribe the type, size and description of all aquatic animal life which may be taken from tidal waters or submerged land, the places where they may be taken and the manner of taking.

(b) The Department is empowered to inspect all aquatic animal life taken from tidal waters or submerged tidal land and all aquatic animal life sold within the State, pursuant to such regulations as it may prescribe. The Department may, by regulation, prescribe the type, size and description of aquatic animal life which may be sold within the State or exported without the State.

(c) The Department may, by regulation, prohibit the importation of any aquatic animal life from sources outside of the State when there is a reasonable suspicion that such aquatic animal life might be harmful to the aquatic animal life of the tidal waters.

3.402 - Licenses.

(a) The Department shall issue such licenses as it may prescribe, by regulation, which shall thereupon be required for the taking, buying, selling, marketing, packing, or canning of aquatic animal life from tidal waters or submerged land, and for boats, vessels and equipment used for such taking, buying, selling, marketing, packing or canning.

(b) The Department shall, by regulation, prescribe the qualifications necessary for obtaining such licenses, the privileges granted by such licenses, the fees for such licenses and the manner and extent to which such licenses may be transferred.

3.403 - Oyster and Shellfish Leases.

(a) The Department is empowered, in the name of State, to lease to any person parcels of submerged tidal land to be used for protecting, sowing, bedding or cultivating oyster or other shellfish. The Department shall, by regulation, prescribe the procedures and qualifications necessary for obtaining such leases, the portions of submerged land available for such leases and the extent to which such leases can be transferred or assigned.

(b) The Department shall only grant the lease if it deems the lease to be in the best interests of the State; provided that no lease shall be granted which is incompatible with the water plan or the plan for the tidal region, and that no lease shall be granted which infringes upon the rights of any other person under Sections 3.202 or 4.302 of this act, or under this Section, unless such person gives his written consent.

(c) The Department shall set forth in all leases granted under this Section the duration, location, size of parcel, consideration, terms of payment and the statements the lessee is required to make. Any person who fails to comply with these terms of the lease shall forfeit his rights under the lease.

3.404 - Transition.

All laws relating to the taking, buying, selling, packing or canning of aquatic animal life from tidal waters or submerged tidal land and all laws relating to the importation or exportation of aquatic animal life to and from the State which are repealed by this act, shall remain in effect as regulations of the Department until changed, amended or modified by the Department pursuant to this act; except that all taxes on the taking, buying, selling, marketing, packing or canning of aquatic animal life from tidal waters or submerged land, and all taxes on the importation or exportation of aquatic animal life to or from the State, in effect when this act is enacted shall continue in force and effect until changed, amended, modified or repealed by the General Assembly. The Department, within two years after the effective date of this act, shall present to the General Assembly a proposed revision of such taxes for its consideration.

ARTICLE 4

PROJECT AND FACILITIES

Part One

General Powers

4.101 - Programs.

The Department shall, from time to time, formulate and adopt programs based upon the water plan and the plan for the tidal region, determining the quality and quantity of water needs of the State and the needs for conservation, enhancement and development of the resources of the tidal region, and proposing projects and facilities to be undertaken by persons, other governmental agencies and the Department in satisfaction of such needs.

4.102 - Assistance.

The Department shall provide administrative and technical assistance to persons and governmental agencies in the development of coordinated programs for the implementation of the water plan and the plan for the tidal region and for the planning and design of projects and facilities in conformity with the water plan and the plan for the tidal region.

4.103 - Recommendations.

The Department may recommend to persons or governmental agencies that they acquire, construct, operate or maintain projects and facilities as the Department may deem appropriate for the implementation of the water plan or the plan for the tidal region.

Part Two

Regulation of Projects and Facilities

4.201 - Regulations.

(a) The Department shall, by regulation, establish standards for the construction, operation and maintenance of projects and facilities which the Department deems necessary to implement the water plan and the plan for the tidal region, in or upon non-tidal surface waters, the flood plain of free-flowing waters determined by the Department as being subject to a fifty (50) year flood frequency, tidal waters or submerged tidal lands, or which are used to appropriate underground water, to assure the optimum development, conservation and utilization of the waters of the State and the resources of the tidal region and to protect the public health, safety and welfare.

(b) No person or governmental agency shall construct, operate or maintain any such project or facility in violation of these standards.

4.202 - Enforcement.

The Department may, at reasonable times, inspect any projects and facilities within the purview of Section 4.201 to determine whether such projects and facilities are being constructed, operated and maintained in compliance with the regulations promulgated thereunder. If the Department finds that such regulations are not being complied with it may issue an order requiring the person or governmental agency to cease construction or operation, to change his mode of construction, operation or maintenance or to make necessary repairs or alterations, so as to comply with such regulations. If such person or governmental agency fails to comply with an order to make repairs or alterations, the Department may make such repairs and alterations and charge such person or governmental agency the expense thereof.

Part Three

Approval of Projects

4.301 - Projects on Non-Tidal Waters by Persons.

No person shall undertake any project in or upon non-tidal surface water or the flood plain of free-flowing waters determined by the Department as being subject to a fifty (50) year flood frequency or which will be used to appropriate underground water without first having secured the approval of the Department pursuant to such regulations as the Department may prescribe except that the Department may, by regulation, exempt from the requirements of this Section such projects as it may reasonably find to have a minimal effect upon the waters of the State. Projects within the purview of this Section shall include, but not be limited to the following:

(a) building, maintaining or modifying of any structure in or upon non-tidal surface waters or the fifty (50) year flood plain;

(b) constructing, maintaining or modifying any reservoir or pond;

(c) changing or diminishing the course or current of any non-tidal surface waters;

(d) changing the configuration of the fifty (50) year flood plain;

(e) drilling or digging of wells, test holes or other borings.

The Department shall only approve such project if it determines that it will not adversely affect the water plan or such part or parts thereof which have been adopted and will not interfere with maintenance of the standards and criteria of water quality established by the Department.

4.302 - Projects on Tidal Waters by Persons.

(a) No person shall undertake any project in or upon tidal waters or submerged tidal lands without first securing a permit from the Department pursuant to such regulations as the Department shall prescribe, except that the Department may, by regulation, exempt from the requirements of this Section such projects as it may reasonably find to have a minimal effect on the tidal region. Projects within the purview of this Section shall include, but not be limited to, the following:

(1) the building, maintaining or modifying of any structure on tidal waters or submerged tidal lands;

(2) the mooring of floating structures in tidal waters at a stationary location on a semi-permanent or permanent basis;

(3) the filling of submerged tidal lands or the disposal of dredged materials in tidal waters;

(4) the dredging, taking or extracting of any sand, gravel, earth, clay, shell deposits, minerals, ore, metals, oil or gas or other materials from tidal waters or submerged tidal land, except that it shall not include the taking of aquatic animal life.

Before issuing a permit the Department shall consider the potential effects of the project on the waters of the State and the resources of the tidal region and, giving due regard to the need for encouraging multiple compatible use of the waters of the State and the resources of the tidal region and for effecting a reconciliation between alternative and conflicting use, shall only issue a permit if it deems the project in the public interest; provided that no permit shall be issued for any project which adversely affects either the water plan or the plan for the tidal region, or such part or parts thereof as have been adopted, and that no permit shall be issued for any project which will derogate the rights of any person under Sections 3.202 or 3.403 of this act or under this Section, unless such persons give their written consent. Any person issued a permit under this Section which entails the use or taking of tidal waters, submerged lands or other resources owned by the State shall comply with the procedure in Section 3.203 of this act before starting such project.

(b) Permits issued under this Section shall specify the character, location and duration of the project, the method to be employed in its execution and such other conditions, restrictions or qualifications as the Department deems in the best interest of the State.

(c) Any person having a vested right in tidal waters or submerged tidal land by virtue of a valid and extant grant, lease or patent or by prior statute or common law, who is refused a permit to exercise such rights, or is granted a permit with conditions, restrictions or qualifications which derogate such right, may petition a court as provided in Section 5.201 of this act to determine whether the action of the Department is an unreasonable exercise of the police power and therefore constitutes a taking of property without compensation. If the court finds the action of the Department to be a taking of property without compensation the court shall order the Department to issue an appropriate permit but the order shall not affect the rights of any other person or governmental agency.

4.303 - Projects by Governmental Agencies.

No governmental agency shall engage in any projects which affect the waters of the State or the resources of the tidal region without first securing the approval of the Department. The Department shall, by regulation, prescribe the procedure to be followed in securing such approval.

Part Four

Acquisition, Operation, Management and Financing of Projects and Facilities by the Department

4.401 - General Powers.

(a) The Department, alone or in cooperation with one or more persons or governmental agencies, may acquire, construct, operate, maintain and administer such projects and facilities as it deems appropriate for the implementation of the water plan and the plan for the tidal region.

(b) Facilities within the purview of this Section include, but are not limited to the following:

(1) sewage or waste collection systems, treatment plants and related facilities;

(2) systems for the collection, storage, appropriation, transmission, sale or exchange of waters;

(3) marine terminals and other improvements to waterways for navigational purposes;

(4) parks, recreation, scenic and historic areas including open space, development rights and easements;

(5) natural areas including wetlands, marsh and other areas suitable for the propogation of fish and wildlife.

(6) shore erosion control devices.

(c) Projects within the purview of this Section include, but are not limited to all activities incident to the construction, operation and maintenance of such facilities and the clearing of debris, aquatic plant life and obstructions from waters of the State, the dredging and marking of channels, and the repletion of fishery resources.

(d) In operation, maintenance and administration of such projects and facilities the Department may act through public or private lessees or concessionaires.

4.402 - Acquisition.

(a) The Department may acquire such facilities by purchase, gift, grant, devise, bequest, lease, condemnation, exchange or otherwise.

(b) The Department may, in the acquisition of such facilities by condemnation, take property already devoted to a public use.

(c) The acquisition of interests or rights in real property for the preservation of open spaces and areas constitutes a public purpose for which public funds may be expended.

4.403 - Financing.

(a) The Department may contribute all or a portion of the costs of acquisition, construction, operation, maintenance or administration of any project or facility by the Department or by some other governmental agency.

(b) The Department may contribute all or a portion of the costs of acquisition, construction, operation, maintenance and administration of any project or facility by the Department in cooperation with one or more persons, or by one or more persons, provided that the Department finds that the benefits to the State from such contribution equal or are greater than the amount of the contribution.

(c) Department contributions may be used to match federal funds that may be or become available.

ARTICLE 5

GENERAL PROVISIONS

Part One

Administrative Procedures

5.101 - Rules and Regulations.

(a) The Department shall adopt, amend and repeal, and prescribe the effective dates for rules of procedures for all activities it is authorized to undertake, and for regulations it may deem necessary or desirable for the implementation and enforcement of this act, or to carry out its responsibility under this act.

(b) The Department shall prepare and provide for the editing, publishing, compiling and indexing of all such rules and regulations.

(c) Any person or governmental agency may petition the Department requesting the promulgation, amendment or repeal of any rule or regulation. The Department shall prescribe by rule the form for such petitions and the procedure for their submission, consideration and disposition.

5.102 - Notice and Hearing Required.

In addition to when required by other provisions of this act, notice shall be given and a hearing held whenever the Department makes or takes the following decisions or actions: (a) the adoption, amendment or repeal of rules and regulations except those relating solely to the internal management of the Department; (b) the adoption, revision, amendment or repeal of the water plan or the plan for the tidal region, or part or parts thereof; (c) the issuance, revision or revocation of permits; (d) the approval or refusal to approve of projects; (e) the designation of all or any portions of the shore lands of the tidal region as areas of restricted development and revisions or abolition of such designations; (f) the approval or disapproval of development regulations submitted by other governmental agencies and any revocation of such approval, and; (g) the leasing of parcels of submerged tidal lands to be used for protecting, sowing, bedding or cultivating of oyster or other shellfish.

5.103 - Notice.

(a) Unless otherwise specified in this act whenever notice is required it shall be given by publication once a week for two successive weeks in a newspaper having general circulation in the area, or portion or portions of the State to be affected by the proposed action of the Department. If the purpose of such notice is to give notice of a proposed public hearing, the notice shall identify the subject or subjects to be considered and specify the time, not less than ten (10) days after final publication, and place of hearing at which interested persons or governmental agencies may appear and present their views. In addition to newspaper publication, notice of the proposed action of the Department, or of the public hearing, shall be posted in a conspicuous place at the offices of the Department.

(b) The Department may mail a copy of the notice to each person and governmental agency which the Department believes may be affected by the proposed action of the Department or by the action it may take after such public hearing, and may also mail a copy of the notice to any other person or governmental agency who shall request such notice. The Department may provide for other means of giving notice to the end that all persons and governmental agencies having an interest in the subject may reasonably be apprised thereof. Any failure of the Department to give notice as provided in this paragraph (b) shall not affect the validity of any action taken by the Department.

(c) The notice need not contain the entire text, plan, or detail of the proposed action of the Department or of the subject matter of the hearing, but shall reasonably identify the same and state the place at which the same may be examined. Whenever copies of such text, plans, or details may be provided by the Department, the notice shall so state and shall give the post office address to which requests for such data may be sent and the price, if any, charged by the Department therefor.

5.104 - Hearings.

(a) The Department shall, after notice and at such place or places as it may determine, conduct at least one public hearing, whenever a hearing is required by this act. Any person or governmental agency claiming to have an interest in the subject matter of the proposed action by the Department shall be entitled to submit data or views at such public hearing.

(b) The Department in the conduct of hearings may admit and give probative force to evidence which possesses probative value commonly accepted by reasonably prudent men in the conduct of their affairs and may take notice of judicially cognizable facts and other general, technical, or scientific facts within its specialized knowledge.

(c) The Department shall adopt rules and regulations governing hearings, including rules of practice and procedure and may prescribe the form and content of pleadings and other documents that may be filed with the Department.

(d) Department hearings may be conducted by the Director or such person or persons as the Director may direct. The Director or any person authorized by the Director may administer oaths and affirmations, examine witnesses and receive evidence at a hearing. Any willful false swearing or affirming at a hearing as to any material fact shall be deemed perjury under the law of the State.

(e) Any final order, decision or action taken after hearing shall be in writing or stated in the record and shall be accompanied by findings of fact and conclusions of law.

5.105 - Subpoenas.

The Director or any persons authorized by the Director may issue subpoenas in the name of the Department to compel witnesses to appear and testify or to produce books, records, papers, documents or other tangible forms or evidence relating to any matter within the authority of the Department.

5.106 - No Review by Board of Review.

The Board of Review of the Department of Natural Resources shall have no power to review any order, decision or action taken by the Department.

Part Two

Judicial Review

5.201 - Review.

(a) Upon the petition of any person or governmental agency aggrieved, any final order, decision or action of the Department made or taken after hearing or with respect to which a hearing is required, and any other order, decision or action which this act provides shall be subject to judicial review, may be reviewed by any court of competent jurisdiction. The petition for review shall be filed within thirty (30) days after the date of such order, decision or action of the Department. Upon the filing of the petition the Clerk of Court shall forthwith, by mail, serve a copy thereof upon the Department which shall thereupon file in the court a certified list of the materials comprising the record of the proceedings and hold for the court all such materials and transmit the original or certified copies of the same or any part thereof to the court, when and as required by it, at any time prior to the final determination of the review.

(b) The filing of a petition for review shall not operate as a stay of the operation of such order or decision unless so ordered by the Department or by the court for good cause shown. For good cause shown, and upon such conditions as may be required and to the extent necessary to prevent irreparable injury, the court may take appropriate and necessary action to preserve the status quo or rights of any of the parties, or others, pending conclusion of the review proceedings.

(c) The court without a jury shall hear and decide the review on the record of proceedings before the Department, and may affirm the decision of the Department or remand the case for further proceedings; or it may reverse or modify the decision if the findings, conclusions or decision, are (1) in violation of constitutional or statutory provisions, or (2) in excess of the authority of the Commission, or (3) made upon unlawful procedure, or (4) affected by other error of law, or (5) unsupported by substantial evidence on the record considered as a whole, or (6) arbitrary, capricious, or an abuse of discretion. The court may appoint a special master to take evidence and make recommendations to the court with respect to any question raised in a petition for review if the court is of the opinion that the question can not be adequately determined from the record of the proceedings before the Department and that the interest of justice so requires.

5.202 - Appeal.

Any petitioner may secure a review of any final judgment of the court by appeal to the Court of Appeals. Such appeal shall be taken in the manner provided by law for appeals from law courts in other civil cases.

Part Three

Enforcement by the Department

5.301 - Injunction.

The Department may enforce or require compliance with any provision of this act or any rule, regulation, decision or order of the Department made pursuant thereto, or restrain any violation of any such provisions, rule, regulation, decision or order, by injunction or any other appropriate action brought in the name of the Department in a court.

5.302 - Penal Sanctions.

(a) Any person violating any provision of this act or regulation of the Department, other than one of a procedural nature or relating solely to the internal management of the Department, shall by guilty of a misdemeanor and, upon conviction, shall be punished by a fine not exceeding five hundred dollars ($500.00) for each offense. Each day during which a violation occurs shall be deemed a separate and additional violation. The employees of the Department assigned to law enforcement duties and all other law enforcement officers are authorized and directed to enforce the provisions of this act and the regulations of the Department, and to make arrests for violation thereof.

(b) Notwithstanding any criminal liability, any person violating any provision of this act or any regulation of the Department, shall be civilly liable to the Department for any actual damage sustained by the Department by reason of such violation.

(c) The penal sanctions herein provided shall not be applicable to any failure or refusal to pay any charge imposed by the Department.

Repeal, Transfer and Amendment of Existing Statutes

All references are to the Annotated Code of Maryland, as amended.

Repeal

Article 14B, §§ 1-4, 7-13.

Article 27, § 485.

Article 43, §§ 387A, 387B, 389, 393, 394A, 396A, 397.

Article 54, §§ 45-48.

Article 66C, §§ 6-13L, 22-30, 33, 234-255, 262-342, 696-717, 756-758.

Article 96A, §§ 1-58, 76-88.

Transfer

Article 14B, §§ 4A-4-0 to Article 66-1/2.

Amendments

Article 43.

The following sections should be amended to eliminate references to sewage, sanitary facilities and sanitary districts:

387, 388, 390-392, 394, 398, 402, 404-406A.

The following sections should be amended to substitute "Chesapeake Bay Basin Department" for "State Board of Health":

387C, 395.

Article 62B.

Section 5(q) should be amended to divest the Maryland Port Authority of power to regulate wharves, bulkheads, piers and piling.

Article 78A.

Section 15 should be amended to divest the Board of Public Works of power to transfer inland waters of the state, land under said waters, and the land underneath the Atlantic Ocean for a distance of three miles from the low watermark of the coast.

III.

COMMENTS

ARTICLE 1

CHESAPEAKE BAY BASIN DEPARTMENT CREATED

This article defines the terms used throughout the act and lays the organizational groundwork for the new Chesapeake Bay Basin Department. This Department replaces the Department of Water Resources and the Department of Chesapeake Bay Affairs under the umbrella of the Department of Natural Resources. The Secretary of Natural Resources has powers under other sections of the Maryland Code to coordinate the activities of the Department with the activities of other related resource agencies such as the Department of Forests and Parks and Department of Game and Inland Fish.

The Director of the Department is appointed by and serves at the pleasure of the Governor. Accordingly the Director will be responsive to the Governor (or his intermediary, the Secretary of Natural Resources) and the Governor is responsible for decisions of the Department. No commissions are established which interfere with this well defined line of responsibility and authority.

Section 1.204 which provides that all moneys received by the Department shall be paid into the general fund, in essence abolishes several special funds which now exist (e.g., Fisheries Research and Development Fund, Waterways Improvement Fund). It is felt that since this act represents a broad delegation of authority to the Department, the Department should be required to clear all expenditures through the ordinary budget process.

Section 1.302 articulates the relationship between the Department and the federal government or interstate compact commissions. Powers of these paramount bodies take precedence.

ARTICLE 2

WATERS OF THE STATE

This article charges the Department with the obligation to adopt a plan for utilization of state waters and gives the Department the powers necessary to implement the plan.

Section 2.201 gives the Department authority to promulgate and enforce quality standards for waters of the state. Section 2.202 supplements this basic power by authorizing the Department to impose other controls such as permits establishing assimilative capacity quotas or effluent charges.

Section 2.204 is designed to foreclose the possibility of collateral attack on the decisions of the Department such as happened in Stanton v. Trustees, 233 A.2d 718 (Me. 1967) where a downstream riparian secured an injunction against an upstream discharger, even though the discharger had secured a permit from the state water quality commission.

Section 2.302 carries over the appropriations permit system for the use of water which has existed in Maryland since 1934. The cross reference to Section 3.203 adds a new wrinkle, by making clear that the state, through the Director, can require payment for the use of tidal waters. This affords a useful managerial tool in limiting the placement of thermal loads on the Bay. Certainly the use of Bay waters as a coolant becomes less attractive to a commercial user if he may be charged the fair market value of such use (one measure of which would be the cost of an alternative cooling system).

Section 2.302(c) functions as a "grandfather's clause". Under Maryland law there is some possibility that pre-1934 users of fresh water and pre-1966 users of tidal waters have some vested rights in such waters. See Md. Ann. Code, Art. 96A, §§ 2, 11 as amended 1968. These rights have never been legally tested. This subsection recognizes that such rights may exist but places the burden of going forward on the person asserting them.

Sections 2.401 through 2.403 gives the Department broad discretion to regulate the operation of boats. The Department of Chesapeake Bay Affairs presently has similar (although more circumscribed) powers under Section 1-11 of Article 14B of the Maryland Code. Section 2.404, however, transfers powers relating to the licensing of boats, presently exercised by Chesapeake Bay Affairs, to the Department of Motor Vehicles.

ARTICLE 3

THE TIDAL REGION

This Article lays the foundation for a series of special regulations over Chesapeake Bay and the bays behind Maryland's barrier beach on the Atlantic Coast.

Section 3.101 directs the Department to prepare a comprehensive plan for Bay development. The sort of plan envisioned is the San Francisco Bay Plan already developed in California.

Section 3.201 restates the State's common law ownership of tidal waters and submerged tidal lands and Section 3.202 specified the rights of riparian land owners therein. Section 3.202 is designed to replace Sections 45 through 48 of Article 54 of the Maryland Code. It gives to the riparian essentially the same rights that the Maryland Attorney General says he has under existing law. See 50 Op. Att'y. General 452 (1965). Whether in fact, Section 3.202 is a constriction of riparian rights depends on whether the Attorney General's narrow reading of existing law is correct.

Section 3.203 provides a procedure through which the Director can transfer the State's interest in tidal waters and submerged tidal lands. Since the Director is the Governor's man the decision is the Governor's. It may be used to sell water (for use as a coolant), sand, gravel, minerals, oil, gas, etc. or land itself as a site for filling. It represents a consolidation of a variety of procedures under existing law. It should be noted that the procedure is hedged with significant safeguards. Before a person can acquire any interest, he must first acquire a permit under the regulatory procedures in either Section 2.302 or 4.302. These permit procedures give optimum protection to both public and private interests. The special notice procedure within 3.203 holds open to public scrutiny the Director's (or Governor's) decision of the price to be charged.

Sections 3.301 through 3.303 provide a new and flexible procedure through which the Department can control development of Bay shoreline. For example, it might use the power in Section 3.301 to protect non-tidal wetlands or to reserve certain shorelines for priority uses such as water-related industry or water-related recreation. Section 3.302 provides a technique through which local governments can preserve their primary land use control jurisdiction by meeting Department standards. Under Section 3.303 the Department is delegated broad powers to promulgate land use control regulations which may take the form of zoning, subdivision controls or permit procedures.

Section 3.401 through 3.404 make a significant change in existing law. They transfer management of the Bay's fishery from statute to regulation. This will give the Department the range of choice necessary for efficient and rational management. Section 3.403 makes possible a dramatic change in oyster management. It permits the Department to shift from a public to private oyster fishery, in whole or part. The Department is given broad enough discretion so that it can negotiate mutually advantageous trade-offs with its counterpart in Virginia.

ARTICLE 4

PROJECTS AND FACILITIES

This Article provides for the regulation, management and operation of projects and facilities affecting the waters of the State and the resources of the tidal region.

Section 4.201 delegates to the Department police power authority to regulate existing project and facilities and Section 4.202 adds special enforcement powers.

Sections 4.301 through 4.303 establish prior approval procedures for all projects affecting State waters and the tidal region. Section 4.301 regulates private projects on privately owned land. Accordingly the Department's approval authority is limited to its police powers. Section 4.302 regulates private projects on what is presumptively publicly owned land or water. Accordingly the Department is given greater discretion in the determination of whether to approve such projects. Persons receiving a permit are required to comply with the procedure outlined in Section 3.203. This provides a mechanism for assuring that the State will receive a fair return for property rights it relinquishes. Section 4.302(c) provides a procedure whereby a person who can rebut the presumption of State ownership (e.g., the owner of a valid and extant patent to submerged tidal land) can vindicate his rights if the Department refuses to recognize them.

Section 4.303 authorizes the Department to regulate projects of other governmental agencies. When dealing with other State or local agencies the powers are plenary---the Department is the supervisor of State waters and the tidal region. When dealing with the U.S. Government or compact commissions, in the exercise of their valid powers the Department has only the power of persuasion.

Sections 4.401 through 4.403 define the Department's role as an operative and financier. It is empowered to buy, build, manage and operate necessary projects and facilities (e.g., waste collection systems, waterways improvements, shore erosion control structures, recreation areas, etc.). It may also contribute towards the financing of such projects and facilities by other governmental agencies or persons but may only contribute amounts to persons that it can justify on a cost-benefit basis.

ARTICLE 5

GENERAL PROVISIONS

Section 5.101 through 5.106 outline the internal working procedures of the Department. Section 5.102 through 5.104 mandate that notice be given and a public hearing be held before important Department decisions are made. Interested persons and governmental agencies are guaranteed an opportunity to present their views.

Section 5.201 and 5.202 provide for judicial review of Department decisions. The procedures outlined therein are supplemented by various other possibilities of review available at common law.

Sections 5.301 and 5.302 gives to the Department civil and criminal sanction which they may use in the enforcement of the statute and the regulations promulgated thereunder.

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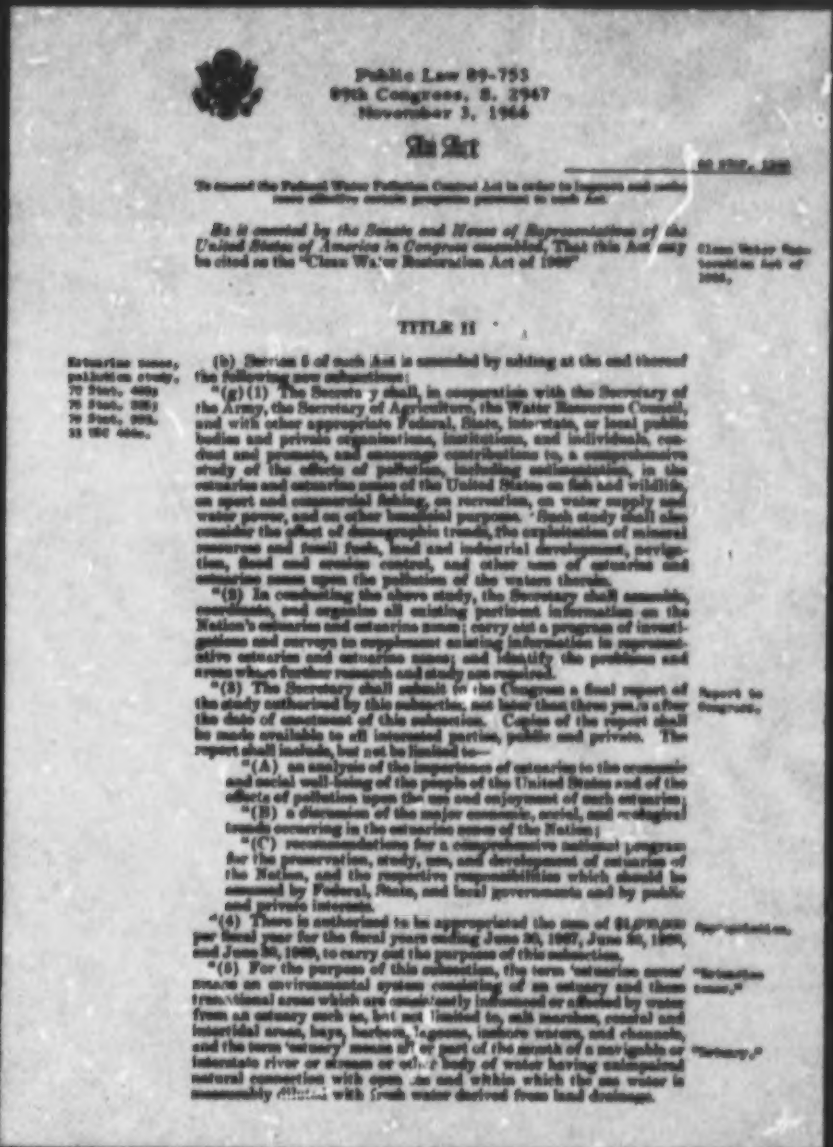
The Enabling Act for the
NATIONAL ESTUARINE POLLUTION STUDY
And the Resulting
ESTUARINE POLLUTION STUDY SERIES



Public Law 89-753
89th Congress, S. 2947
November 3, 1966

An Act

80 STAT. 1246

To amend the Federal Water Pollution Control Act in order to improve and make more effective certain programs pursuant to such Act.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Clean Water Restoration Act of 1966".

Clean Water Restoration Act of 1966.

TITLE II

Estuarine zones, pollution study. 70 Stat. 498; 75 Stat. 208; 79 Stat. 903. 33 USC 466c.

(b) Section 5 of such Act is amended by adding at the end thereof the following new subsections:

"(g)(1) The Secretary shall, in cooperation with the Secretary of the Army, the Secretary of Agriculture, the Water Resources Council, and with other appropriate Federal, State, interstate, or local public bodies and private organizations, institutions, and individuals, conduct and promote, and encourage contributions to, a comprehensive study of the effects of pollution, including sedimentation, in the estuaries and estuarine zones of the United States on fish and wildlife, on sport and commercial fishing, on recreation, on water supply and water power, and on other beneficial purposes. Such study shall also consider the effect of demographic trends, the exploitation of mineral resources and fossil fuels, land and industrial development, navigation, flood and erosion control, and other uses of estuaries and estuarine zones upon the pollution of the waters therein.

"(2) In conducting the above study, the Secretary shall assemble, coordinate, and organize all existing pertinent information on the Nation's estuaries and estuarine zones; carry out a program of investigations and surveys to supplement existing information in representative estuaries and estuarine zones; and identify the problems and areas where further research and study are required.

Report to Congress.

"(3) The Secretary shall submit to the Congress a final report of the study authorized by this subsection, not later than three years after the date of enactment of this subsection. Copies of the report shall be made available to all interested parties, public and private. The report shall include, but not be limited to—

"(A) an analysis of the importance of estuaries to the economic and social well-being of the people of the United States and of the effects of pollution upon the use and enjoyment of such estuaries;

"(B) a discussion of the major economic, social, and ecological trends occurring in the estuarine zones of the Nation;

"(C) recommendations for a comprehensive national program for the preservation, study, use, and development of estuaries of the Nation, and the respective responsibilities which should be assumed by Federal, State, and local governments and by public and private interests.

Appropriation.

"(4) There is authorized to be appropriated the sum of $1,000,000 per fiscal year for the fiscal years ending June 30, 1967, June 30, 1968, and June 30, 1969, to carry out the purposes of this subsection.

"Estuarine zones."

"Estuary."

"(5) For the purpose of this subsection, the term 'estuarine zones' means an environmental system consisting of an estuary and those transitional areas which are consistently influenced or affected by water from an estuary such as, but not limited to, salt marshes, coastal and intertidal areas, bays, harbors, lagoons, inshore waters, and channels, and the term 'estuary' means all or part of the mouth of a navigable or interstate river or stream or other body of water having unimpaired natural connection with open sea and within which the sea water is measurably diluted with fresh water derived from land drainage.